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Argonne NATIONAL LABORATORY

Final Report: Results of the 2007 Investigation of Potential Contamination at the Former CCC/USDA Facility in Powhattan, Kansas

Environmental Science Division

USDA United States Department of Agriculture

Work sponsored by Commodity Credit Corporation, United States Department of Agriculture

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Final Report: Results of the 2007 Investigation of Potential Contamination at the Former CCC/USDA Facility in Powhattan, Kansas

by
Applied Geosciences and Environmental Management Section
Environmental Science Division, Argonne National Laboratory

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Notation

AGEM	Applied Geosciences and Environmental Management
AMSL	above mean sea level
BGL	below ground level
°C	degree(s) Celsius
CCC	Commodity Credit Corporation
CD	compact disc
CGSB	Co-op grain storage building
CLP	Contract Laboratory Program
COC	chain of custody
CPT	cone penetrometer
DF	dilution factor
ENVSYS	Envirosystems, Inc.
EPA	U.S. Environmental Protection Agency
ft	foot (feet)
gal	gallon(s)
GC	gas chromatograph
gpm	gallon(s) per minute
in.	inch(es)
KDHE	Kansas Department of Health and Environment
µg/kg	microgram(s) per kilogram
µg/L	microgram(s) per liter
µm	micrometer(s)
µS/cm	microsiemen(s) per centimeter
MCL	maximum contaminant level
mg/L	milligram(s) per liter
mi	mile(s)
min	minute
MS	mass spectrometer
MW	monitoring well
NAD	North American Datum
NAVD	North American Vertical Datum
ppb	part(s) per billion
PVC	polyvinyl chloride
PWS	public water supply
QA	quality assurance
QC	quality control
RBSL	risk-based screening level (Tier 2)
RPD	relative percent difference

RWD	Rural Water District
SDG	sample delivery group
sec	second(s)
STL	Severn-Trent Laboratories
TA	TestAmerica
TOC	top of casing
USDA	U.S. Department of Agriculture
VOC	volatile organic compound

Final Report: Results of the 2007 Targeted Investigation of Potential Contamination at the Former CCC/USDA Facility in Powhattan, Kansas

Executive Summary

The 2007 investigation of carbon tetrachloride and chloroform contamination at Powhattan, Kansas, was conducted at the request of the Kansas Department of Health and Environment (KDHE 2006a). The Environmental Science Division of Argonne National Laboratory implemented the investigation on behalf of the Commodity Credit Corporation of the U.S. Department of Agriculture (CCC/USDA).

The primary purposes of the investigation were to evaluate potential contaminant source areas on the former CCC/USDA property, determine the horizontal and vertical extent of potential contamination, conduct groundwater monitoring, and provide recommendations for future action.

The Investigation

During the 2007 investigation at Powhattan, carbon tetrachloride contamination was found at high concentrations in soil and groundwater samples collected throughout the investigation area. The contamination is most likely associated with the past use of grain fumigants containing carbon tetrachloride. Three source areas were identified, along with a fourth potential source area.

Cone penetrometer (CPT) equipment was used to collect 53 groundwater samples at 45 targeted investigation locations, plus 196 vertical-profile soil samples at 13 of the locations. Groundwater samples were also collected from 7 newly installed monitoring wells, 10 previously existing KDHE monitoring wells, and 3 private wells. These samples were analyzed for volatile organic compounds (VOCs) to generate the data needed to characterize the contaminant distribution and investigate potential source areas.

Water levels in existing and newly installed monitoring wells were recorded by using data loggers. Monitoring of groundwater levels for determination of the hydraulic gradient began in 2005 and is continuing.

Conclusions

Conclusions of the 2007 investigation at Powhattan are as follows:

- Four plumes of elevated carbon tetrachloride concentrations in groundwater were identified in the 2007 investigation. The configurations of three of these groundwater plumes, coupled with analytical data for soil samples, indicate associations with three separate identified or potential soil source areas on the former CCC/USDA property. The fourth groundwater plume has migrated onto the former CCC/USDA property but originated in a fourth soil source area identified previously by the KDHE on the Co-op property.

- The highest concentration of carbon tetrachloride identified in vadose zone soils, 2,140 µg/kg, occurred in a sample collected on the northern part of the former CCC/USDA property. This concentration is significantly above the regulatory level of 200 µg/kg for the soil-to-groundwater protection pathway. In all, 6 soil samples from this location (TI02) contained carbon tetrachloride (217-2,140 µg/kg) at concentrations above the regulatory level, as did four samples from an adjacent location (TI01) on the former CCC/USDA property (at 250-282 µg/kg). Some 22 additional soil samples from these 2 locations contained carbon tetrachloride at concentrations ranging from traces (between the laboratory method detection limit of 1.0 µg/kg and the quantitation limit of 10 µg/kg) to 198 µg/kg. Locations TI01 and TI02 define a primary soil source area identified in the 2007 investigation.

- Aside from highly contaminated locations TI01 and TI02 in the northern part of the former CCC/USDA property (discussed above), 19 soil samples collected in the vadose zone at 4 other locations on or near the former CCC/USDA property contained trace to low concentrations of carbon tetrachloride (up to 68 µg/kg).

- The concentrations of carbon tetrachloride detected in groundwater samples varied significantly across the site. The highest level (1,090 µg/L) was detected at location TI01 on the northern part of the former CCC/USDA property. This concentration is significantly above the regulatory level of

5.0 μg/L for carbon tetrachloride in groundwater. Concentrations above the regulatory level were detected at 19 additional locations on and near the former CCC/USDA property. The boundaries of the carbon tetrachloride distribution in groundwater were constrained. Seven monitoring wells were installed for monitoring of the magnitude and extent of contaminant migration.

- The detection of chloroform in soil and groundwater samples suggests that natural degradation of carbon tetrachloride is occurring to a limited extent.

- The groundwater flow direction at the site appears to be toward the northeast on the northern part of the site and toward the southwest on the southern part of the site.

Recommendations

The following recommendations should be considered for the Powhattan site:

- A potentially responsible party analysis should be conducted to determine whether other parties used the former CCC/USDA property to use, store, or dispose of carbon tetrachloride. Current and prior ownership records also need to be confirmed.

- The results of the KDHE's 2005 investigation to differentiate between source areas on the Co-op and former CCC/USDA properties were fully incorporated into the plans for the CCC/USDA 2007 investigation and the interpretation of the results reported here. Subsequently, the Co-op submitted a work plan for and conducted a limited investigation of its own, the results of which have not been made available to the CCC/USDA and Argonne. The Co-op will be preparing a work plan for a more thorough investigation. When the results of both Co-op investigations become available, they should be analyzed and interpreted in relation to the CCC/USDA results reported here.

- Limited remediation of the soil source should be considered as an option for investigation locations TI01 and TI02, in the northeast part of the former CCC/USDA facility (in the northern source area identified in the 2007 investigation).

- Monitoring of the groundwater contamination should be conducted twice yearly in the existing permanent monitoring network.

1 Introduction and Background Information

The 2007 investigation of carbon tetrachloride and chloroform contamination at Powhattan, Kansas, was conducted at the request of the Kansas Department of Health and Environment (KDHE 2006a). The Environmental Science Division of Argonne National Laboratory implemented the investigation on behalf of the Commodity Credit Corporation of the U.S. Department of Agriculture (CCC/USDA).

The investigation was designed to accomplish the following:

1. Evaluate potential contaminant source areas on the former CCC/USDA property.

2. Determine the horizontal and vertical extent of potential contamination.

3. Provide the technical basis for recommendations for future action.

As the work progressed and contamination was found at higher concentrations — and with wider distribution — than had been anticipated, the scope of the investigation was expanded with the approval of the CCC/USDA and KDHE project managers.

1.1 Investigation Goals

Four investigation goals were proposed in the *Work Plan* (Argonne 2007), which received regulatory approval (KDHE 2007). The goals were as follows:

1. Collect data that support recommendations for future actions.

2. Collect adequate data to verify groundwater flow direction(s).

3. Determine whether private or public water supply wells are influencing the flow direction.

4. Evaluate the potential contribution of the former CCC/USDA facility to the source of contamination.

This report details and interprets the data collected during the 2007 investigation at Powhattan. The investigation was conducted in four phases and met the goals defined in the *Work Plan* (Argonne 2007).

1.2 Background Information and Previous Investigations

1.2.1 Background Information

Powhattan, Kansas, is a small rural town with 91 residents occupying 44 housing units (2000 Census). Located in the southwestern portion of Brown County, Powhattan is 60 mi north of Topeka, Kansas, in Section 13, Township 3 South, Range 15 East (Figure 1.1). Over the years, grain has been stored at multiple locations in Powhattan, including the facility formerly operated by the Brown County Agricultural Conservation Association (the predecessor of the CCC/USDA) and the former Brown County Cooperative Association (now Ag Partners Cooperative, Inc., or the Co-op) (Figure 1.2).

Documentation for the boundaries depicted for the former CCC/USDA facility in the present report was presented in Appendix C of the *Work Plan* (Argonne 2007). These boundaries differ from the boundaries shown by the KDHE in its *Trip Report* for a visit to Powhattan (KDHE 2006a). The KDHE indicated (KDHE 2006b) that the boundaries depicted in the *Trip Report* (KDHE 2006a) had been based solely on the extent of the constructed bins shown in the 1959 and 1966 aerial photographs (see Appendix C in Argonne 2007), rather than formal lease documentation. Consequently, those boundaries were to be considered approximate (KDHE 2006b).

The principal water source for Powhattan residents is the Brown County Rural Water District No. 2 (RWD 2). This water supply became available in June 1995. Previously, Powhattan residents had obtained their water from public water supply wells PWS 1 and PWS 2 (Figure 1.2).

1.2.2 Summary of Previous Investigations

Records from the KDHE indicate that the Powhattan public water supply wells have been tested for nitrates since 1970, or earlier, and for carbon tetrachloride since 1986. The history of investigations at Powhattan is summarized in Table 1.1 of this document. A detailed discussion is in Appendix A of the *Work Plan* (Argonne 2007).

Nitrate concentrations detected in the public supply wells at Powhattan have consistently exceeded the maximum contaminant level (MCL) of 10 mg/L for nitrate (Table 1.2 and Figure 1.3). Carbon tetrachloride was initially detected in these wells in 1986. In response to the detection of carbon tetrachloride, KDHE began several years of assessments, investigations, and long-term monitoring of contaminant levels at the site.

During previous investigations at Powhattan, ten monitoring wells were installed by or for the KDHE (Figure 1.2): three wells (KDHEP-1, KDHEP-2, KDHEP-3) in 1988 and seven wells (MW4-MW10) in 1995. The well depths range from 56 ft below ground level (BGL) to 68.1 ft BGL. Except for MW7, all were completed to the top of bedrock. Well MW7 was completed at 56 ft BGL; bedrock was encountered at 66 ft BGL at this location (Table 1.2).

Details of all work conducted at Powhattan prior to the 2007 investigation reported here are in Appendix A of the *Work Plan* (Argonne 2007). Included are construction data for previously existing wells, the locations of these wells, and analytical data collected previously for the monitoring wells and public water supply wells.

TABLE 1.1 History of work conducted at Powhattan, Kansas.

Date	Description of Work	Reference[a]
1970-1988	Multiple samplings of public water supply wells demonstrated a history of nitrate contamination in the Powhattan public water supply.	KDHE 1988b (App. 2)
9 Sep 1986	In statewide testing of public water supply wells, carbon tetrachloride was detected in well PWS 1 at 4 μg/L. No contamination was detected in PWS 2.	KDHE 1988b (App. 10)
14 Oct 1986	Resampling of well PWS 1 identified carbon tetrachloride at 2 μg/L. No contamination was detected in PWS 2.	KDHE 1988b (App. 10)
7 Feb 1987	Powhattan Groundwater Contamination Site was entered into the U.S. Environmental Protection Agency (EPA) CERCLIS database.	KDHE 1988b
27 Oct 1987	*Potential Hazardous Waste Site: Preliminary Assessment*, Form 2070-12, was prepared by the KDHE for the EPA Region VII.	EPA 1987
29 Oct 1987	*Preliminary Assessment Conducted at Powhattan Public Water Supply* was issued by the KDHE.	KDHE 1987
6 Nov 1987	Carbon tetrachloride and chloroform were not detected in 6 soil gas samples, though 1,2-dichloroethane was. Sampling locations were not documented. Soil gas effort was abandoned.	KDHE 1988b (App. 6); Tracer 1988
29 Feb 1988	Interviews with two individuals about the use of fumigants by the Co-op and the CCC/USDA indicated that the fumigant contractor was Thomas-Demode Fumigant Company.	KDHE 1988a (App. 5)
17 Mar 1988-12 Apr 1988	Monitoring wells KDHEP-1, KDHEP-2, and KDHEP-3 were installed and sampled by the KDHE.	KDHE 1988b (App. 7)
1 Jun 1988	*Potential Hazardous Waste Site: Site Inspection Report* was prepared by the KDHE for the EPA Region VII.	EPA 1988a
30 Jun1988	*Final Site Inspection Report* was prepared by the KDHE for the EPA. The report discussed 6 soil gas samples, installation of 3 monitoring wells, sampling of 16 of the 23 groundwater locations identified, and installation and sampling of 2 soil borings.	KDHE 1988b
30 Jun 1988	Hazard Ranking System score sheets were completed by the KDHE for the EPA Region VII.	EPA 1988b
14 Oct 1988	The EPA ordered the Powhattan public water supply system to comply with the Safe Drinking Water Act.	EPA 1988c
13 Feb 1989	The KDHE ordered the Powhattan public water supply system to issue a public notice of nitrate violations above the maximum contaminant level and to seek a new water source.	KDHE 1989
12 Apr 1994	GeoCore Services, Inc., developed a *Work Plan* for an investigation of groundwater contamination at three sites in Brown County, Kansas, including Powhattan.	GeoCore 1994a
20 May 1994	GeoCore conducted Phase I sampling of the existing monitoring wells and private wells.	GeoCore 1994b
June 1995	Water supply from RWD 2 became available; wells PWS 1 and PWS 2 removed from service.	Owens 2007

TABLE 1.1 (Cont.)

Date	Description of Work	Reference[a]
15 Mar 1996	GeoCore prepared an *Environmental Site Investigation Report* for the KDHE (first issued 6/20/95, revised 3/15/96). The report described installation of 7 monitoring wells, sampling of 11 wells, and soil sampling in 5 soil borings with field analysis.	GeoCore 1996
6–9 Oct 1998	Geotechnical Services, Inc. (GSI), conducted the initial sampling event of planned long-term monitoring (LTM). Work included sampling of 10 monitoring wells.	GSI 1998
25 Apr 2000	GSI conducted the second LTM sampling event.	GSI 2000
14–15 Jan 2002	GSI conducted the third LTM sampling event.	GSI 2002
18 May 2004	Maxim Technologies, Inc. (a TetraTech Company), conducted the fourth LTM sampling event.	Maxim 2004
7 Jun 2005	Terranext conducted the fifth LTM sampling event.	Terranext 2005
31 Oct 2005	The KDHE developed a work plan for field activities and sampling to differentiate between source areas on the Co-op and CCC/USDA properties.	KDHE 2005
2-3 Nov 2005	Terranext conducted sampling the sixth LTM sampling event.	Terranext 2005
9 Feb 2006	The KDHE issued a *Supplemental Sampling Event Trip Report*. Work described included sampling (August 19, 2005) of soil at 0.5 ft BGL inside the large building now on former CCC/USDA property; sampling of soils from the surface to 4 ft BGL (November 1–2, 2005) for nitrate and volatile organic analyses; and soil and groundwater sampling across the site (November 7–18, 2005) with a Geoprobe.	KDHE 2006a
16 July 2007	Well PWS 1 had been abandoned; well PWS 2 was in the process of being abandoned.	Owens 2007

[a] Complete references are in Section 6.

TABLE 1.2 Summary of analytical data for Powhattan monitoring wells and public water supply wells, 1970 to 2005.[a]

Well	Screen Interval (ft BGL)	Sampling Dates	Number of Sampling Events	Depth to Water (ft BGL)	Nitrate as N (mg/L)	Concentration (μg/L)			
						Carbon Tetrachloride	Chloroform	Ethylene Dibromide	Benzene
Monitoring Wells									
KDHEP-1	55.1–65.1	1988–2005	10	6.85–15.22	8.09–14.6	88–500	7.5–29	ND[b]	ND
KDHEP-2	58.1–68.1	1988–2005	10	7.71–17.00	10.8–18.1	ND–78	ND–4.9	ND	ND
KDHEP-3	52–62	1988–2005	10	4.39–14.85	8.1–32.5	ND–7.8	ND–0.48J[c]	ND	ND
MW4	54.7–64.7	1995–2005	7	9.01–16.72	15.2–31.7	2.1–4.6	ND–0.54	ND	ND
MW5	58–68	1995–2005	7	7.02–17.54	12.1–26.3	ND	ND	ND	ND
MW6	56–66	1995–2005	7	6.72–14.67	9.25–19.1	ND	ND	ND	ND–4.4
MW7	46–56	1995–2005	6	2.87–12.20	15.3–52.1	ND–180	ND–6.4	ND	ND
MW8	55–65	1995–2005	7	10.11–18.73	24.9–39.0	1.3–6.0	ND–1.5	ND	ND
MW9	52–62	1995–2005	7	1.52–12.30	9.9–55.8	ND	ND	ND–3.3	ND
MW10	56–66	1995–2005	7	5.25–15.72	5.5–10.4	24–65	2.4–11.0	ND	ND
Public Water Supply Wells									
PWS 1	Unknown	1971–1988	9	Unknown	18.81–87.0	2.0–4.0	ND	ND	ND
PWS 2	Unknown	1970–1988	7	Unknown	15.53–100	ND	ND	ND	ND

[a] Complete data (including results for private wells) are in Appendix A of the *Work Plan* (Argonne 2007). Analyses for some constituents were omitted in some sampling events.

[b] ND: contaminant not detected at the method detection limit indicated in Appendix A of the *Work Plan* (Argonne 2007).

[c] Qualifier J indicates an estimated concentration below the method quantitation limit.

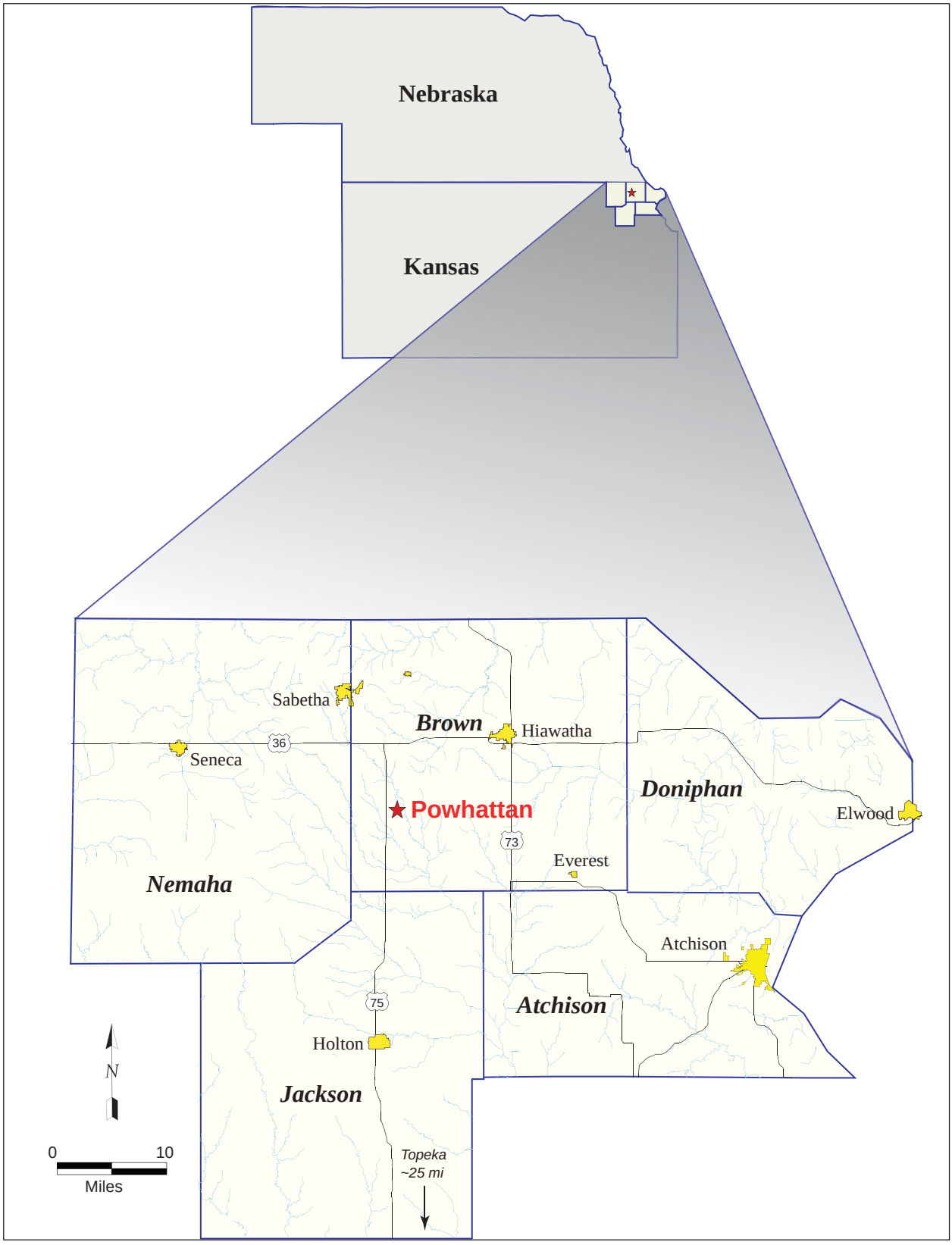

FIGURE 1.1 Location of Brown County and Powhattan, Kansas.

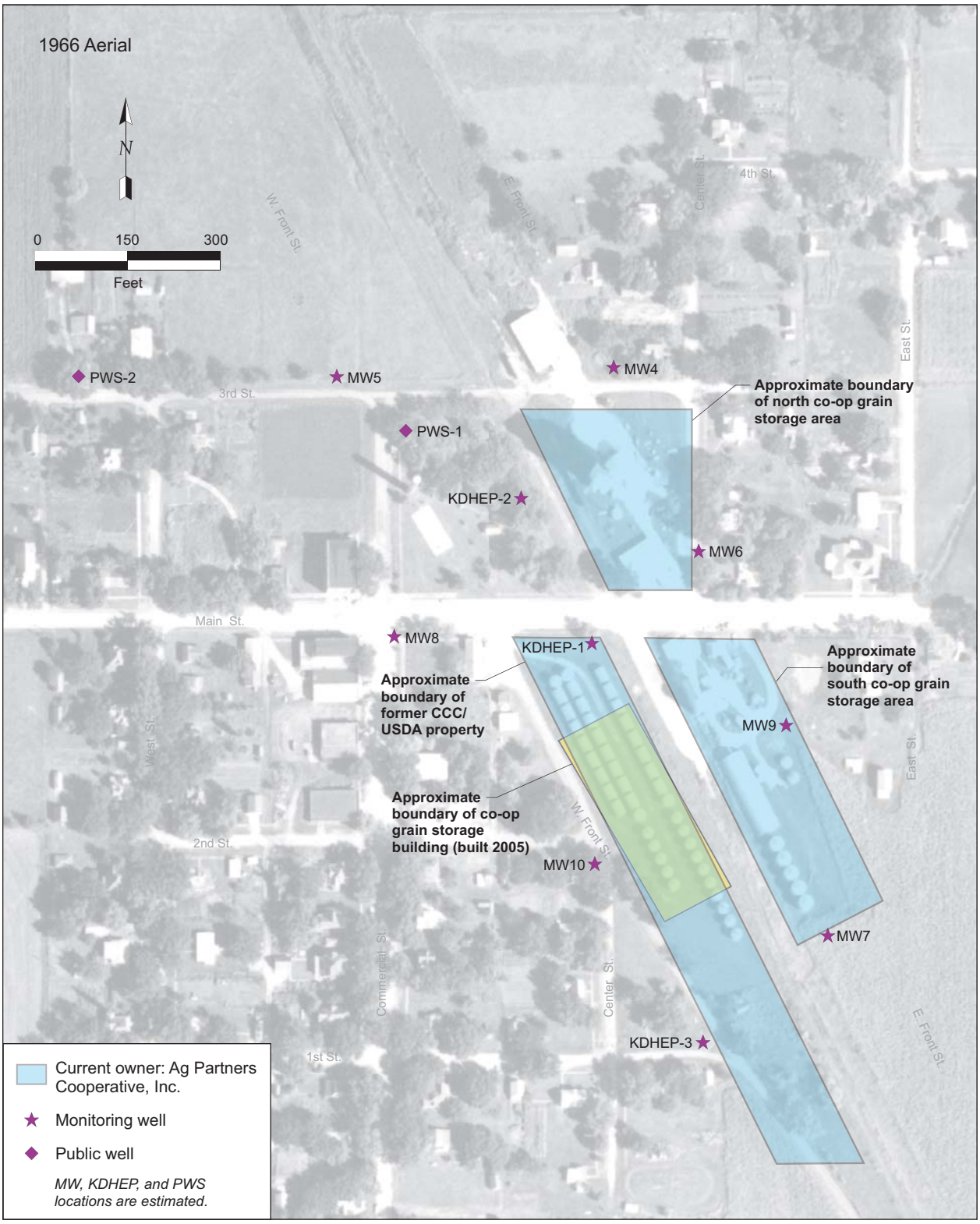

FIGURE 1.2 Approximate locations of the former CCC/USDA facility, other relevant structures and facilities, public supply wells at Powhattan, and previously existing KDHE monitoring wells at Powhattan. Source of photograph: USDA (1966).

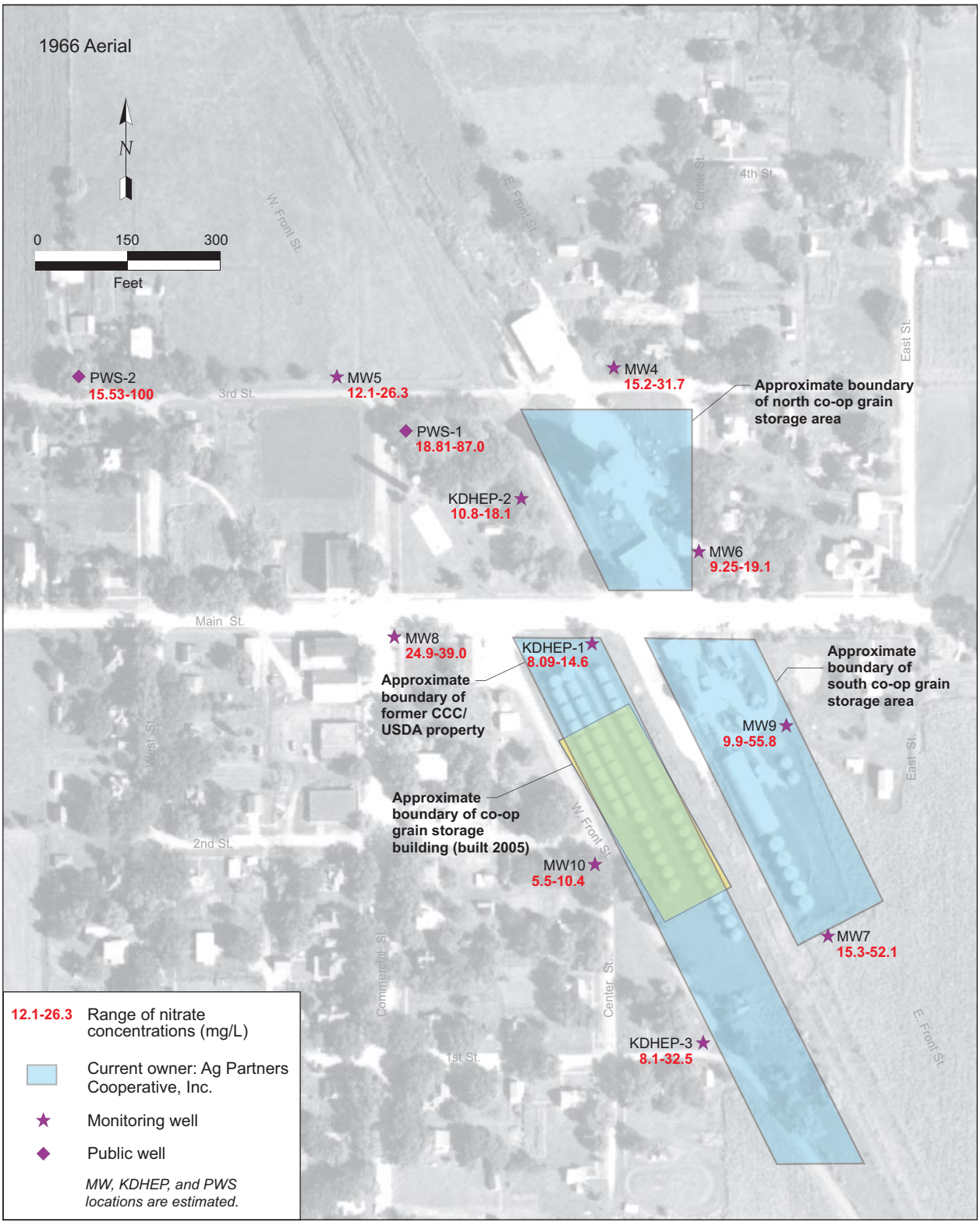

FIGURE 1.3 Historical data for nitrate in groundwater samples from monitoring wells and public water supply wells in 1970-2005. Source of photograph: USDA (1966).

2 Investigative Methods

The 2007 investigation at Powhattan was performed by using an iterative process of data collection, evaluation, and interpretation during field activities. This methodology ensured that the data necessary to achieve the specific investigation goals listed in Section 1 were acquired. Throughout data evaluation and interpretation, the CCC/USDA and KDHE project managers were kept informed of the analytical results as they were received, and modifications to the *Work Plan* (Argonne 2007) were made with their input and approval.

Throughout the field program, a comprehensive quality assurance/quality control (QA/QC) program was implemented to confirm the reliability of all information as it was accumulated. Procedures for the individual techniques employed in the investigation are in the *Master Work Plan* (Argonne 2002). This section provides a brief overview of the methods used to implement the 2007 investigation, and it identifies modifications made to the site-specific *Work Plan* for the investigation (Argonne 2007) in response to data acquired during the field work. The modifications were made with the approval of the CCC/USDA and the KDHE project managers.

The 2007 investigation at Powhattan involved the collection of (1) soil and groundwater samples from 13 boreholes through use of the cone penetrometer (CPT), (2) groundwater samples from 32 additional CPT locations; and (3) groundwater samples from 10 previously existing KDHE monitoring wells, 7 newly installed CCC/USDA monitoring wells, and 3 private wells. All locations investigated and sampled are shown in Figure 2.1.

Field work during the 2007 investigation at Powhattan was conducted in four phases, as follows:

Phase 1: Data were collected from existing wells to establish the current groundwater flow direction and contaminant levels.

Phase 2: Subsurface contaminant conditions were determined on the former CCC/USDA property.

Phase 3: The horizontal and vertical extent of groundwater contamination associated with potential source areas identified on the former CCC/USDA facility was determined.

Phase 4: Monitoring wells were installed to expand the existing monitoring network and augment data collected during Phase 2 and Phase 3. These wells and their locations were discussed and mutually agreed upon by the CCC/USDA and KDHE project managers.

2.1 Methods to Determine the Current Groundwater Flow Direction and Contaminant Levels

In September 2005, Argonne installed data loggers in the previously existing KDHE monitoring wells (KDHEP-1, KDHEP-2, KDHEP-3, MW4, MW5, MW6, MW7, MW8, MW9, MW10). The data logger installed in MW8 in September 2005 had to be removed in October 2005 because of water damage and the condition of the flush mount. A logger was installed again at this location in January 2008 in an attempt to recover additional data. Manual water level measurements were made periodically at MW8 until the reinstallation. The data logger installed in MW7 in September 2005 could not be located in January 2007 because the well surface completion had been covered with debris, gravel, and grain. The well was uncovered in July 2007, and data were retrieved from the logger.

In September 2007 and January 2008 (after the 2007 investigation itself had ended), data loggers were installed in all of the new CCC/USDA wells (MW11-MW17). The data generated were used to determine the current groundwater flow direction. Maps depicting hydraulic gradients developed from the data logger records are discussed in Section 4.1.

Current contaminant concentrations in groundwater were determined by collecting samples from all 10 previously existing monitoring wells (KDHEP-1, KDHEP-2, KDHEP-3, MW4-MW10). The public water supply wells were not sampled, because they are no longer in use or accessible for sampling. Well PWS 1 has been abandoned, and PWS 2 is being abandoned (Owens 2007).

In July 2007, a door-to-door survey was conducted near the former CCC/USDA property to locate private wells and to determine the status of private wells identified in previous

investigations. Several private wells listed in previous reports were no longer available for sampling or were unknown to current property owners. Six additional private wells (Kickapoo Indian Nation, L. Smith, J. Frayer, B. Schuetz, Smith [different from the L. Smith well, owner's first initial unknown], R. Frayer) were located west and south of the former CCC/USDA property. Three of these newly identified wells (L. Smith, B. Schuetz, Kickapoo) were easily accessible and were sampled during the 2007 investigation. Other private wells either were not accessible or were not close enough to the site to warrant sampling. Figure 2.2 shows all private well locations and the status of private wells listed in previous investigation reports.

2.2 Methods to Determine the Subsurface Contaminant Conditions on the Former CCC/USDA Property

The subsurface contaminant conditions on the former CCC/USDA property were determined on the basis of the soil and groundwater data collected during the 2007 investigation.

To document the contaminant conditions *on and immediately adjacent to the former CCC/USDA property*, soil samples were collected from 12 CPT boreholes (TI01-TI12). Groundwater samples were collected at 18 CPT investigation locations (TI01-TI12, TI27, TI28, TI30, TI31, TI37, TI43), 1 previously existing KDHE monitoring well (KDHEP-1), and 4 newly installed CCC/USDA monitoring wells (MW11, MW12, MW13, MW17) (Figure 2.1).

At locations *outside the former CCC/USDA property*, both soil and groundwater samples were collected at 1 CPT location (TI18), and groundwater samples only were collected at 26 CPT locations (TI13-TI17, TI19-TI26, TI29, TI32-TI36, TI38-TI42, TI44, TI45), 9 previously existing KDHE wells (KDHEP-2, KDHEP-3, MW4-MW10), 3 newly installed CCC/USDA wells (MW14-MW16), and 3 private wells (L. Smith, B. Schuetz, Kickapoo) (Figure 2.1).

2.2.1 Methods to Identify Subsurface Soil Contamination on the Former CCC/USDA Property

At 12 locations across the former CCC/USDA property and immediately adjacent to the property boundaries (TI01-TI12; Figure 2.1), soil samples were collected continuously at intervals of approximately 4 ft. Soil samples were collected similarly at 1 location east of the former CCC/USDA property (TI18). The only part of the former CCC/USDA property not investigated was the sizeable area that is currently under a large grain storage building

constructed in 2005. If sampling under this building is required, alternative direct-push methods will have to be used.

Soil samples were collected from near the ground surface (approximately 1.5-2.5 ft BGL) to the top of the saturated zone or to CPT refusal. The depth to the saturated zone was estimated on the basis of the lithology encountered during probing activities. Soil samples were collected by using a 4-in.-diameter core barrel that allowed for discrete and continuous collection of samples from all boreholes. Lithologic descriptions of soil cores are in Appendix A.

Soil samples were collected in laboratory-approved containers, sealed, placed on dry ice, and transported to the Applied Geosciences and Environmental Management (AGEM) Laboratory at Argonne for preparation and analysis for volatile organic compounds (VOCs) including carbon tetrachloride, chloroform, and methylene chloride.

2.2.2 Methods to Identify Subsurface Groundwater Contamination on the Former CCC/USDA Property

At locations across the former CCC/USDA property and immediately adjacent to the property boundaries (TI01-TI12, TI27, TI28, TI30, TI31, TI37, TI43; Figure 2.1), groundwater samples were collected at intervals that produced water. Such intervals were generally limited to the basal 5 ft of the lithologic sequence immediately above CPT refusal. (Refusal generally occurred before bedrock was reached.) Two CPT boreholes in this area (TI03, TI05) produced water from the basal 10-ft interval; at each of these locations, 2 discrete water samples were collected at 5-ft intervals. One CPT borehole in this area (TI04) produced water from a 23-ft zone; 4 discrete water samples were collected at 5-ft intervals at location TI04.

The groundwater samples collected with the CPT were taken at discrete intervals through a 5-ft-long, 1-in.-diameter, Schedule 40 polyvinyl chloride (PVC), mill-slotted (0.010-in.) screen.

Groundwater samples were collected in laboratory-approved containers, sealed, placed on ice, and transported to the AGEM Laboratory for preparation and analysis for VOCs including carbon tetrachloride, chloroform, and methylene chloride.

2.3 Methods to Determine the Horizontal and Vertical Extent of Contamination Associated with Any Potential Source Areas on the Former CCC/USDA Facility

The originally approved scope of work (Argonne 2007) included determination of the extent and concentration of carbon tetrachloride in groundwater associated with soil contamination detected on the former CCC/USDA property. This work included collection of soil and groundwater samples from selected locations both on and outside that property.

The data initially collected indicated the presence of carbon tetrachloride in groundwater both on and outside the former CCC/USDA property, at concentrations above the maximum contaminant level (MCL) and Kansas Tier 2 risk-based screening level (RBSL) values of 5.0 µg/L. Therefore, additional CPT locations for groundwater sampling (TI20, TI21, TI30, TI34-TI45; Figure 2.1) were added to the scope of work to improve delineation of the extent and concentrations of contamination. This change in the original scope of work (Argonne 2007) was approved by the CCC/USDA and the KDHE project managers.

Groundwater samples were collected in laboratory-approved containers, sealed, placed on ice, and transported to the AGEM Laboratory for preparation and analysis for VOCs including carbon tetrachloride, chloroform, and methylene chloride.

The horizontal and vertical extent of contamination in groundwater was determined through interpretation of data collected from the added CPT locations, the newly installed CCC/USDA monitoring wells, and the previously existing KDHE monitoring wells.

2.4 Methods to Expand the Monitoring Well Network

In September 2005, Argonne placed data loggers in KDHE monitoring wells KDHEP-1, KDHEP-2, KDHEP-3, MW4, MW5, MW6, MW7, MW8, MW9, and MW10 (Figure 2.1) to begin long-term monitoring of water levels. The data logger at MW8 was damaged shortly after installation and was removed in October 2005.

After the extent of groundwater contamination was determined during the initial phases of the 2007 field work, CCC/USDA monitoring wells MW11-MW17 (Figure 2.1) were installed

to expand the existing network. The number of wells installed and the locations were approved by the CCC/USDA and the KDHE project managers.

The new CCC/USDA monitoring wells were installed by using the direct-push capabilities of the CPT. In accordance with KDHE regulations, well installation methods included use of the CPT to advance a 4.25-in. borehole to a depth of 20 ft BGL, then a 3.25-in.-diameter hole from 20 ft BGL to CPT refusal (at 60-70 ft BGL). Monitoring wells were cased with 1-in.-diameter, Schedule 40 PVC with 10 ft of 0.010-in. slotted screen. Appropriate quantities of sand and grout were placed in the annular space of each borehole. Wells were completed flush to the ground. The construction diagrams and Kansas water well completion registrations (WWC-5 records) are in Appendix B.

Additional data loggers were placed in new CCC/USDA monitoring wells MW13-MW15 and MW17 in September 2007 and in wells MW8, MW11, MW12, and MW16 in January 2008 (after the investigation itself had ended). The complete water level monitoring network as of January 2008 is shown in Figure 2.3.

FIGURE 2.1 Sampling locations in the 2007 investigation at Powhattan. Source of photograph: USDA (2006).

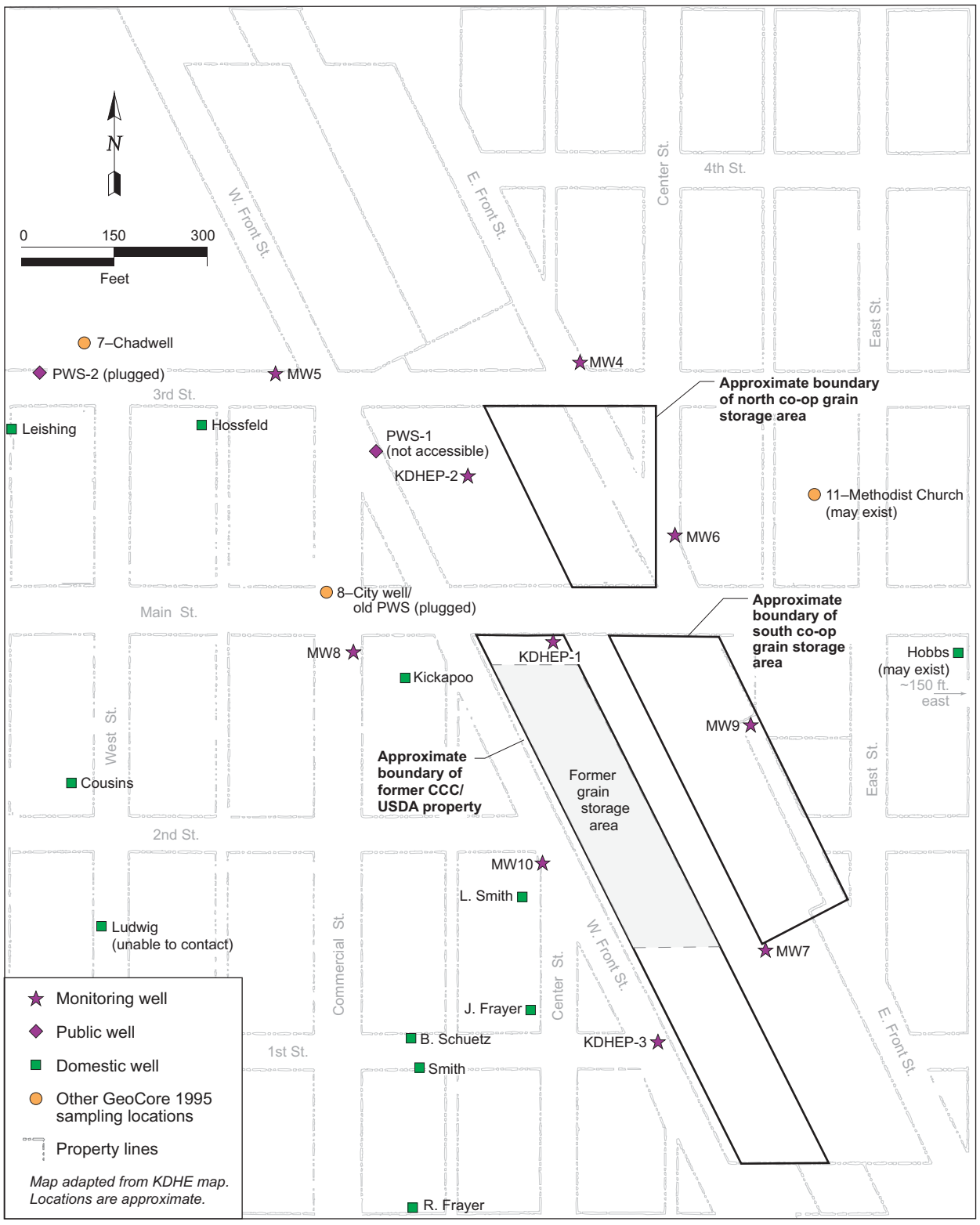

FIGURE 2.2 Status of private wells near the former CCC/USDA property, as determined in a door-to-door survey in July 2007.

FIGURE 2.3 Network of monitoring wells equipped with data loggers for water level monitoring at Powhattan, as of January 2008.

3 Field and Laboratory Data

This section presents the field and laboratory data generated during the 2007 Powhattan investigation. A chronological summary of the field activities is in Appendix C. The methods and procedures followed in collecting all data are described in detail in Section 2 and in the *Master Work Plan* (Argonne 2002). A detailed interpretation of the data is in Section 4 of the present report.

3.1 Monitoring Well Construction

The CPT was used to install 7 monitoring wells (MW11-MW17; Figure 2.1). The construction diagrams and Kansas water well completion registrations (WWC-5 records) are in Appendix B. The wells were constructed in accordance with KDHE regulations.

3.2 Coordinates Survey Data

The subsurface soil and groundwater sampling locations and the newly installed monitoring wells were surveyed by Schwab-Eaton, P.A., Manhattan, Kansas, to provide horizontal and vertical control for stratigraphic correlation and water level monitoring. Coordinates survey data are in Appendix D, Table D.1. The reference point for horizontal coordinates at each soil boring location was a metal pin driven into the ground. The reference point for each monitoring well elevation was the top of the casing.

3.3 Analytical Data for Subsurface Soil Samples

A total of 196 subsurface soil samples were collected in vertical profiles at 12 borehole locations (TI01-TI12) on and immediately adjacent to the former CCC/USDA property boundary and at 1 borehole location (TI18) outside the former property (Figure 2.1). The analytical results for VOCs in the soil samples are summarized in Table 3.1. Complete analytical results for soil samples are in Supplement 1. The supplementary material is on a compact disc (CD) inside the back cover of this report.

At each of the 13 borehole locations, discrete subsurface soil samples were collected at intervals of approximately 4 ft. The shallowest sample was collected at a depth of 1.4 ft BGL (TI12), and the deepest was at 58.5 ft BGL (TI02). The primary purpose of the soil sampling was to investigate potential source areas and migration pathways for carbon tetrachloride. Locations were selected on the basis of analytical data from past and current investigations.

Of the 196 soil samples analyzed during this investigation, 10 contained carbon tetrachloride at concentrations exceeding the KDHE's RBSL of 200 µg/kg for the soil-to-groundwater protection pathway. Of these 10 soil samples, 4 were from location TI01, and 6 were from location TI02 (Figure 3.1).

The highest carbon tetrachloride concentration detected in soil in the 2007 investigation (2,140 µg/kg) occurred at 30 ft BGL at location TI02, near the northeast corner of the former CCC/USDA property (Figure 3.1 and Table 3.1). Only 1 soil sample collected at this location (at 10 ft BGL) contained no detectable carbon tetrachloride. The 6 samples collected at depths of 18-38 ft BGL all contained carbon tetrachloride at concentrations (217-2,140 µg/kg) exceeding the RBSL. Of the soil samples collected at other depths at TI02, 4 contained quantifiable carbon tetrachloride concentrations of 10-140 µg/kg, and 7 showed trace concentrations below the laboratory method quantitation limit of 10 µg/kg. These analytical data identified the area at and around location TI02 as a primary soil source for carbon tetrachloride on the former CCC/USDA property.

At location TI01, in the far northeast corner of the former CCC/USDA property (Figure 3.1), carbon tetrachloride was not detected in the 3 uppermost soil samples of the vertical profile, at depths of 2 ft BGL, 6 ft BGL, and 10 ft BGL (Table 3.1). Lower in the vertical profile at TI01, carbon tetrachloride was detected in all 15 soil samples. Of the 18 soil samples collected at this location, 4 contained carbon tetrachloride at concentrations above the RBSL of 200 µg/kg, as follows: 250 µg/kg at 38 ft BGL, 269 µg/kg at 42 ft BGL, 282 µg/kg (the maximum at location TI01) at 46.75 ft BGL, and 253 µg/kg at 50 ft BGL. The 11 soil samples collected at other depths in the profile at TI01 showed carbon tetrachloride concentrations of 53-198 µg/kg.

Carbon tetrachloride was detected at concentrations at or above the method quantitation limit of 10 µg/kg — but below the RBSL of 200 µg/kg — in soil samples from 4 additional locations (Figure 3.1), as follows: at location TI03 in 1 sample (10 µg/kg at 58 ft BGL), at TI04 in 3 samples (12-22 µg/kg at 46-51.75 ft BGL), at TI10 in 3 samples (29-68 µg/kg at 34-46 ft

BGL), and at TI18 in 3 samples (10-112 µg/kg at 42-50 ft BGL). Locations TI03 and TI04 are just outside the northwestern border of the former CCC/USDA property, near locations TI02 and TI01 — an area identified by the 2007 investigation as a primary soil source of contamination (see Section 4.2). Location TI10 is near the western border of the former CCC/USDA facility, approximately midway between its northern and southern ends. Location TI18 is on Co-op property, east of the northeast corner of the former CCC/USDA property. In addition to the quantifiable (≥ 10 µg/kg) and trace levels (< 10 µg/kg) of carbon tetrachloride detected in soils at locations TI01, TI02, TI03, TI04, TI10, and TI18, trace levels were detected at TI11 at 46-54 ft BGL. Location TI11 is approximately midway between locations TI04 and TI10, just outside the western border of the former CCC/USDA property. No carbon tetrachloride was detected in soil at locations TI05, TI06, TI07, TI08, TI09, and TI12 (Figure 3.1 and Table 3.1).

The distribution of chloroform in soil was consistent with the distribution of carbon tetrachloride (Figure 3.2 and Table 3.1). Chloroform was detected at concentrations above the method quantitation limit of 10 µg/kg in 10 soil samples from location TI01 (11-47 µg/kg at 14-45.5 ft BGL), 6 soil samples from TI02 (25-72 µg/kg at 18-38 ft BGL), and 1 soil sample from TI18 (11 µg/kg at 46 ft BGL). These concentrations are far below the KDHE's RBSL of 960 µg/kg for chloroform in the soil-to-groundwater protection pathway. Trace concentrations of chloroform (below the method quantitation limit of 10 µg/kg) were found in soil at locations TI01, TI02, TI03, TI04, TI10, and TI11. Chloroform was not detected in soil at locations TI05, TI06, TI07, TI08, TI09, and TI12.

Methylene chloride was not detected in any soil sample collected during the 2007 investigation.

3.4 Analytical Data for Groundwater Samples

During the 2007 investigation, 73 groundwater samples were collected from temporary piezometers, monitoring wells, and private wells. Sampling was conducted in accordance with procedures in the *Master Work Plan* (Argonne 2002).

The analytical results for VOCs in the groundwater samples are in Table 3.2. The lateral distributions of carbon tetrachloride and chloroform in these samples (maximum concentration at

each location) are shown in Figure 3.3 and Figure 3.4, respectively. The field measurements made during sampling are on CD, in Table S2.1 of Supplement 2.

Locations for groundwater sampling were selected on the basis of analytical data from past investigations and the 2007 investigation (as results became available). Sampling locations were approved by the CCC/USDA and the KDHE project managers.

On and immediately adjacent to the boundaries of the former CCC/USDA property (Figure 3.3), 29 groundwater samples were collected from 18 temporary piezometers (TI01-TI12, TI27, TI28, TI30, TI31, TI37, TI43), 1 previously existing KDHE monitoring well (KDHEP-1), and 4 newly installed CCC/USDA monitoring wells (MW11, MW12, MW13, MW17). Groundwater sample depths were consistently 50-66 ft BGL, except for 2 samples collected at location TI04 at depths of 42-47 ft BGL and 49-54 ft BGL. The depth to groundwater was defined, in part, by unsuccessful attempts to collect groundwater samples from piezometers at locations TI01, TI02, TI03, TI04, TI13, TI16, and TI18. After intervals of several hours to three days, piezometers screened in shallower zones at these locations remained dry or failed to produce adequate quantities of groundwater for sampling. Further information is in Appendix C, Table C.1.

At locations outside the former CCC/USDA property, 44 groundwater samples were collected from 27 temporary piezometers (TI13-TI26, TI29, TI32-TI36, TI38-TI42, TI44, TI45), 9 existing KDHE monitoring wells (KDHEP-2, KDHEP-3, MW4-MW10), 3 newly installed CCC/USDA monitoring wells (MW14-MW16), and 3 private wells (Kickapoo, L. Smith, B. Schuetz).

All groundwater samples were analyzed for VOCs by using U.S. Environmental Protection Agency (EPA) Method 524.2. Complete analytical results for VOCs in the groundwater samples are in Table 3.2. Carbon tetrachloride was detected at or above the AGEM Laboratory method quantitation limit of 1.0 µg/L in groundwater samples collected from piezometers TI01-TI05, TI10-TI17, TI19-TI22, TI26-TI28, TI30, TI31, TI33, TI34, TI37, TI38, TI40, and TI43, as well as monitoring wells KDHEP-1, KDHEP-2, KDHEP-3, MW4, MW7, MW8, MW10, MW11, and MW12 (Figure 3.3). In addition, trace levels of carbon tetrachloride (below the method quantitation limit) were detected in groundwater samples from piezometers TI06, TI08, TI09, TI18, TI25, TI29, TI35, TI39, TI41, and TI42 and from monitoring wells MW6, MW13, and MW16 (Figure 3.3). No carbon tetrachloride was detected (at a detection

limit of 0.1 µg/L) in groundwater samples from TI07, TI23, TI24, TI32, TI36, TI44, and TI45; monitoring wells MW5, MW9, MW14, MW15, MW17; or any of the 3 private wells (Figure 3.3).

A total of 36 groundwater samples collected from temporary piezometers and monitoring wells contained carbon tetrachloride at concentrations exceeding the MCL and RBSL values of 5.0 µg/L for this compound. Of these samples, 20 were collected at locations on or immediately adjacent to the former CCC/USDA property (at TI01-TI05, TI10-TI12, TI28, TI30, TI31, TI43, KDHEP-1, MW11, MW12). The remaining 16 groundwater samples with carbon tetrachloride concentrations above the MCL and RBSL values were collected outside the former CCC/USDA property (at TI13-TI17, TI19-TI21, TI26, TI33, TI34, TI38, KDHEP-2, KDHEP-3, MW7, MW10) (Figure 3.3).

Chloroform was detected at or above the method quantitation limit of 1.0 µg/L in 33 groundwater samples, as well as at trace levels below the quantitation limit in 15 samples (Table 3.2 and Figure 3.4). All of the chloroform concentrations measured in groundwater samples were below the MCL and RBSL values of 80 µg/L for this compound.

No VOCs were detected in groundwater samples from piezometers TI07, TI13, TI23, TI24, TI32, TI36, TI44, and TI45; monitoring wells MW5, MW6, MW14, MW15, and MW17; or the Kickapoo and L. Smith private wells. Methylene chloride was not detected in any groundwater sample collected during the 2007 investigation.

3.5 Groundwater Flow Direction and Water Level Data

Groundwater depth and flow data collected during the 2007 investigation confirmed the findings of earlier KDHE investigations, which identified a groundwater divide in the general vicinity of Main Street. The groundwater gradient north of Main Street is generally northeast; south of Main Street, the gradient is southwest.

In September 2005, Argonne placed data loggers in KDHE monitoring wells KDHEP-1, KDHEP-2, KDHEP-3, MW4, MW5, MW6, MW7, MW8, MW9, and MW10. Additional data loggers were placed in new CCC/USDA monitoring wells MW13, MW14, MW15, and MW17 in September 2007 and in wells MW11, MW12, and MW16 in January 2008 (after the

investigation itself had ended) (Figure 2.3). The data loggers have been recording water levels continuously at 30-min intervals, except as indicated in Section 2.1. The complete set of water levels recorded by the data loggers from 2005 to early 2008 is on CD in Supplement 3, Table S3.1. Maps depicting hydraulic gradients developed from the data logger records are discussed in Section 4.1.

3.6 Results of Quality Control Activities

The QA/QC procedures for sample collection, handling, and analysis during the 2007 investigation are described in detail in the *Master Work Plan* (Argonne 2002). A detailed QA/QC report addressing activities related to sample collection, handling, and analysis during the investigation is on CD, in Supplement 4.

Results of QA/QC activities are summarized as follows:

- Sample integrity was maintained successfully throughout the collection, shipping, and analysis activities through documentation of samples as they were collected and the use of custody seals and chain-of-custody records.

- All samples were received with custody seals intact and at appropriate preservation conditions. All samples were analyzed within the required holding times. Carbon tetrachloride and chloroform were not detected in laboratory method blanks.

- As an indicator of cross-contamination, 30 trip blanks were prepared and included in containers of soil or water samples shipped for organic analyses. Neither carbon tetrachloride nor chloroform was detected in trip blanks shipped with samples for VOCs analyses to the AGEM Laboratory and Envirosystems, Inc., in Columbia, Maryland. A trace concentration of chloroform was detected in one of two trip blanks associated with samples shipped to TestAmerica Laboratories [formerly Severn-Trent Laboratories, Inc.], Colchester, Vermont, for verification VOCs analyses.

- Seven equipment rinsates and one field blank were collected to represent water used during equipment decontamination and drilling. Carbon tetrachloride was not detected in the rinsates or field blanks. A low concentration of chloroform (3.7 µg/L) was detected in the blank of water used during the investigation.

- Soil and groundwater samples were analyzed for carbon tetrachloride and chloroform at the AGEM Laboratory by using the purge-and-trap method. Dual analyses of samples indicated consistency in the sampling and analytical methodologies. Dual analyses were accomplished through either analysis of replicate samples submitted to the laboratory or duplicate analysis of samples selected by the laboratory. Consistency in both the sampling and analytical methodologies is indicated. The data from the AGEM Laboratory are acceptable for quantitative determination of contaminant distribution.

- The analyses of water samples at the AGEM Laboratory with EPA Method 524.2 were verified at a second laboratory with EPA-defined Contract Laboratory Program (CLP) methodology. Of the 73 groundwater samples and replicates analyzed by the AGEM Laboratory, 8 (10%) were also analyzed with CLP methodology by Envirosystems, Inc. Agreement was good over the range of contaminant concentrations detected. Samples analyzed at the AGEM Laboratory were analyzed by the CLP laboratory with similar results. Outside laboratory data are on CD, in Supplement 5.

- The analyses of soil samples by the AGEM Laboratory with EPA Method 8260B were verified by a second laboratory (TestAmerica Laboratories) with the same analytical method. Of the 196 soil samples analyzed by the AGEM Laboratory, 19 (10%) were also analyzed by TestAmerica. Agreement was good over the range of contaminant concentrations detected. Soil samples analyzed by the AGEM Laboratory were analyzed by TestAmerica with similar results. Outside laboratory data are on CD, in Supplement 5.

3.7 Waste Characterization, Handling, and Disposal

Wastewater generated during the 2007 field activities at Powhattan was subjected to laboratory analysis by Pace Analytical Services, Lenexa, Kansas. After the results confirmed that the carbon tetrachloride contaminant levels were below the MCL and RBSL values of 5.0 µg/L (Table S4.2 in Supplement 4, on CD), the wastewater was discharged without treatment at the Sabetha wastewater treatment plant. No waste soil was generated during probing activities; therefore, no disposal of waste soil was necessary.

3.8 Analytical Data Summary

The data collected during the 2007 investigation address the objectives detailed in the KDHE-approved site-specific *Work Plan* (Argonne 2007) and approved modifications. Key analytical results are as follows:

- Carbon tetrachloride was detected above the RBSL value of 200 µg/kg for the soil-to-groundwater protection pathway in 10 of the 196 soil samples collected. Of these soil samples, 6 were collected at TI02, and 4 were collected at TI01. Both locations are in the northeast portion of the former CCC/USDA property.

- Location TI02 exhibited the highest carbon tetrachloride concentration found in soil: 2,140 µg/kg at 30 ft BGL. The 5 additional soil samples from TI02 exhibiting carbon tetrachloride concentrations (217-1,745 µg/kg) above the RBSL were collected at depths of 18-38 ft BGL. All soil samples collected at TI02 in the vertical profile from 18 ft BGL to 51 ft BGL contained quantifiable carbon tetrachloride (> 10 µg/kg).

- At location TI01, 4 of the 5 soil samples collected at 38-50 ft BGL contained carbon tetrachloride at concentrations above the RBSL value of 200 µg/kg, at 250-282 µg/kg. In the vertical soil profile at TI01, carbon tetrachloride was consistently found at quantifiable concentrations (> 10 µg/kg) from 14 ft BGL to 58 ft BGL.

- Other locations with soil samples containing carbon tetrachloride at concentrations of 10-112 µg/kg were TI03 (58 ft BGL), TI04 (46-51.75 ft BGL), TI10 (34-46 ft BG), and TI18 (42-50 ft BGL). Locations TI03 and TI04 are immediately west of the former CCC/USDA property, near its northwest corner. Location TI10 is near the western boundary of the former CCC/USDA property, approximately midway between its northern and southern ends. Location TI18 is east of the northeast corner of the former CCC/USDA property, on the Co-op property. Trace concentrations of carbon tetrachloride (< 10 µg/kg) were found in soil at location TI11, just outside the western boundary of the former CCC/USDA property, midway between TI04 and TI10. No carbon tetrachloride was detected in soils at locations TI05, TI06, TI07, TI08, TI09, and TI12.

- Chloroform was found at concentrations at or above the method quantitation limit of 10 µg/kg in soil samples collected at locations TI01, TI02, and TI18. None of the concentrations exceeded the KDHE's RBSL of 960 µg/kg for chloroform for the soil-to-groundwater protection pathway. Samples from TI01, TI02, TI03, TI04, TI10, and TI11 contained trace levels (< 10 µg/kg) of chloroform. No chloroform was detected in soils from locations TI05, TI06, TI07, TI08, TI09, and TI12.

- Carbon tetrachloride was detected at or above the AGEM Laboratory method quantitation limit of 1.0 µg/L in 44 of the 73 groundwater samples collected.

- Carbon tetrachloride was detected at or above the MCL and RBSL values of 5.0 µg/L in 36 groundwater samples. Of these 36 samples, 20 were collected at locations on or immediately adjacent to the former CCC/USDA property. The other 16 were collected outside that area.

- The highest carbon tetrachloride concentrations in groundwater were detected at locations TI01 (1,090 µg/L), TI43 (854 µg/L), and KDHEP-1 (542 µg/L). These locations are in or immediately adjacent to the northeast corner of the former CCC/USDA property. Groundwater samples containing carbon tetrachloride concentrations > 100 µg/L were collected at nearby locations TI03, TI04, TI16, Ti17, and MW11. Samples from surrounding locations

contained carbon tetrachloride at concentrations above the regulatory level of 5.0 µg/L.

- Groundwater samples containing carbon tetrachloride at concentrations > 100 µg/L were collected adjacent to the southwest corner of the recently constructed grain storage building on the former CCC/USDA property (location TI10 and MW12), as well as at location TI26, to the southwest. Samples from nearby locations contained carbon tetrachloride at concentrations above the regulatory level of 5.0 µg/L or at trace levels.

- Groundwater samples from location TI30 (near the eastern boundary of the former CCC/USDA facility) and from MW7 (to the east and outside the former CCC/USDA property) contained carbon tetrachloride at > 100 µg/L. Samples from nearby locations contained carbon tetrachloride at concentrations above the regulatory level of 5.0 µg/L or at trace levels.

- Groundwater samples from locations TI11, TI34, and MW10 contained carbon tetrachloride at concentrations above the regulatory level of 5.0 µg/L. Location TI11 is just outside the boundary of the former CCC/USDA facility, and TI34 and MW10 are to the west. Samples collected farther to the west, at TI25 and TI35, contained trace concentrations.

- Groundwater samples from 16 locations showed no detectable concentrations of carbon tetrachloride.

- Chloroform was detected above the AGEM Laboratory method quantitation limit of 1.0 µg/L in 33 of the 73 groundwater samples collected. The highest concentration detected was 35 µg/L, in samples collected at TI01 and MW11, in and near the primary carbon tetrachloride source area identified in the 2007 investigation. None of the concentrations exceeded the MCL and RBSL values of 80 µg/L for chloroform.

- Trace concentrations of chloroform (below the AGEM Laboratory method quantitation limit of 1.0 µg/L) were detected in 15 groundwater samples, and 25 samples showed no detectable concentrations.

- Methylene chloride was not detected in soil or groundwater samples collected during the 2007 investigation.

TABLE 3.1 Summary of analytical results for soil samples collected during the 2007 investigation at Powhattan.

				Concentration (µg/kg)		
Location	Number of Samples	Depth (ft BGL)	Sampling Date	Carbon Tetrachloride	Chloroform	Methylene Chloride
TI01	1	2	7/10/07	ND[a]	ND	ND
	1	6	7/10/07	ND	ND	ND
	1	10	7/10/07	ND	2.3 J[b]	ND
	1	14	7/10/07	158	32	ND
	1	18	7/10/07	57	13	ND
	1	22	7/10/07	130	22	ND
	1	24.75	7/10/07	145	29	ND
	1	27	7/10/07	151	29	ND
	1	30.5	7/10/07	104	26	ND
	1	34	7/10/07	198	38	ND
	1	38	7/10/07	250	47	ND
	1	42	7/10/07	269	11	ND
	1	45.5	7/10/07	79	14	ND
	1	46.75	7/10/07	282	7.2 J	ND
	1	50	7/10/07	253	6.3 J	ND
	1	53	7/10/07	93	2.2 J	ND
	1	55	7/10/07	53	1.9 J	ND
	1	58	7/10/07	53	1.9 J	ND
TI02	1	2	7/11/07	3.6 J	ND	ND
	1	6	7/11/07	6.8 J	ND	ND
	1	7.5	7/11/07	2.3 J	ND	ND
	1	10	7/11/07	ND	1.7 J	ND
	1	14	7/11/07	3.6 J	8.9 J	ND
	1	18	7/11/07	217	32	ND
	1	22	7/11/07	396	25	ND
	1	26	7/11/07	759	72	ND
	1	30	7/11/07	2140	61	ND
	1	34.5	7/11/07	1745	59	ND
	1	38	7/11/07	483	31	ND
	1	42	7/11/07	140	6.1 J	ND
	1	46	7/11/07	58	2.3 J	ND
	1	50	7/11/07	14	1.2 J	ND
	1	51	7/11/07	10	1.1 J	ND
	1	54	7/11/07	4.7 J	ND	ND
	1	57.5	7/11/07	4.7 J	ND	ND
	1	58.5	7/11/07	3.5 J	ND	ND

TABLE 3.1 (Cont.)

Location	Number of Samples	Depth (ft BGL)	Sampling Date	Concentration (µg/kg) Carbon Tetrachloride	Chloroform	Methylene Chloride
TI03	10	2-38	7/11-12/07	ND	ND	ND
	1	41.25	7/12/07	1.1 J	1.5 J	ND
	1	42.75	7/12/07	2.1 J	1.7 J	ND
	1	46	7/12/07	7.7 J	2.0 J	ND
	1	50	7/12/07	8.7 J	3.8 J	ND
	1	54	7/12/07	ND	ND	ND
	1	58	7/12/07	10	4.2 J	ND
TI04	10	2-38	7/12-13/07	ND	ND	ND
	1	42	7/13/07	3.4 J	1.5 J	ND
	1	43.25	7/13/07	5.6 J	2.0 J	ND
	1	46	7/13/07	12	3.4 J	ND
	1	48.75	7/13/07	14	3.5 J	ND
	1	51.75	7/13/07	22	4.3 J	ND
TI05	15	2-55.1	7/16-17/07	ND	ND	ND
TI06	16	2-55.2	7/15/07	ND	ND	ND
TI07	14	2-54	7/31/07	ND	ND	ND
TI08	14	1.5-54	7/28-29/07	ND	ND	ND
TI09	17	2-55.3	7/15-16/07	ND	ND	ND
TI10	1	2	7/27/07	7.7 J	ND	ND
	7	6-30	7/27/07	ND	ND	ND
	1	34	7/27/07	29	1.9 J	ND
	1	38	7/27/07	68	5.0 J	ND
	1	42	7/27/07	6.3 J	2.0 J	ND
	1	46	7/27/07	39	2.5 J	ND
	1	50	7/27/07	8.5 J	ND	ND
TI11	11	1.5-42	7/26/07	ND	ND	ND
	1	46	7/26/07	6.5 J	1.0 J	ND
	1	50	7/26/07	5.7 J	4.7 J	ND
	1	54	7/26/07	1.0 J	ND	ND
TI12	12	1.4-46	7/27-28/07	ND	ND	ND

TABLE 3.1 (Cont.)

Location	Number of Samples	Depth (ft BGL)	Sampling Date	Concentration (µg/kg) Carbon Tetrachloride	Chloroform	Methylene Chloride
TI18	10	2-38	7/29-30/07	ND	ND	ND
	1	42	7/30/07	13	ND	ND
	1	46	7/30/07	112	11	ND
	1	50	7/30/07	10	ND	ND
	1	54	7/30/07	ND	ND	ND

[a] ND, not detected at an instrument detection limit of 1.0 µg/kg.

[b] Qualifier J indicates an estimated concentration below the purge-and-trap method quantitation limit of 10 µg/kg.

TABLE 3.2 Results of organic analyses at the AGEM Laboratory for groundwater samples collected during the 2007 investigation at Powhattan.

				Concentration (µg/L)		
Location	Sample	Depth (ft)	Sampling Date	Carbon Tetrachloride	Chloroform	Methylene Chloride
Cone penetrometer sampling locations						
TI01	PHTI01-W-24060	59.5-64.5	7/9/07	1,090	35	ND[a]
TI02	PHTI02-W-24220	54-59	7/16/07	30	4.1	ND
TI02	PHTI02-W-24061	58.75-63.75	7/9/07	53	6.9	ND
TI03	PHTI03-W-24171	55-60	7/14/07	88	17	ND
TI03	PHTI03-W-24063	60.75-65.75	7/9/07	110	13	ND
TI04	PHTI04-W-24210	42-47	7/14/07	43	11	ND
TI04	PHTI04-W-24211	49-54	7/14/07	44	13	ND
TI04	PHTI04-W-24158	55-60	7/13/07	223	32	ND
TI04	PHTI04-W-24130	60.4-65.4	7/12/07	229	32	ND
TI05	PHTI05-W-24240	53-58	7/18/07	1.8	0.7 J[b]	ND
TI05	PHTI05-W-24224	59-64	7/16/07	27	6.7	ND
TI06	PHTI06-W-24221	57.5-62.5	7/16/07	0.4 J	ND	ND
TI07	PHTI07-W-24296	56.14-61.14	7/29/07	ND	ND	ND
TI08	PHTI08-W-24294	56-61	7/28/07	0.8 J	0.6 J	ND
TI09	PHTI09-W-24195	57.6-62.6	7/15/07	0.4 J	0.3 J	ND
TI10	PHTI10-W-24304	54.9-59.9	7/27/07	176	9.4	ND
TI11	PHTI11-W-24270	51.5-56.5	7/26/07	17	2.7	ND
TI12	PHTI12-W-24688	53.6-58.6	8/2/07	17	2.0	ND
TI13	PHTI13-W-24149	55.1-60.1	7/18/07	ND	ND	ND
TI13	PHTI13-W-24144	61.1-66.1	7/17/07	36	4.3	ND
TI14	PHTI14-W-24147	58-63	7/17/07	3.8	0.7 J	ND
TI14	PHTI14-W-24146	63.6-68.6	7/17/07	5.2	0.8 J	ND
TI15	PHTI15-W-24148	62.9-67.9	7/18/07	33	4.9	ND
TI16	PHTI16-W-24176	61.5-66.5	7/14/07	159	33	ND
TI17	PHTI17-W-24177	58-63	7/15/07	178	7.4	ND
TI18	PHTI18-W-24172	57.3-62.3	7/14/07	0.9 J	ND	ND
TI19	PHTI19-W-24241	61.1-66.1	7/18/07	11	0.6 J	ND
TI20	PHTI20-W-24251	57.24-63.24	7/29/07	5.3	0.6 J	ND
TI21	PHTI21-W-24253	60.8-65.8	7/29/07	25	3.6	ND
TI22	PHTI22-W-24280	62-67	7/26/07	1.3	0.6 J	ND
TI23	PHTI23-W-24281	60.5-65.5	7/26/07	ND	ND	ND
TI24	PHTI24-W-24350	68.58-73.58	7/30/07	ND	ND	ND
TI25	PHTI25-W-24291	60-65	7/27/07	0.4 J	ND	ND
TI26	PHTI26-W-24293	55.8-60.8	7/28/07	138	16	ND
TI27	PHTI27-W-24283	54.7-59.7	7/26/07	3.3	1.1	ND
TI28	PHTI28-W-24285	54-59	7/26/07	10	1.1	ND
TI29	PHTI29-W-24289	50.2-55.2	7/27/07	0.6 J	ND	ND
TI30	PHTI30-W-24298	52-57	7/28/07	380	13	ND
TI31	PHTI31-W-24287	52-57	7/27/07	14	0.3 J	ND

TABLE 3.2 (Cont.)

Location	Sample	Depth (ft)	Sampling Date	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride
Cone penetrometer sampling locations (cont.)						
TI32	PHTI32-W-24297	54.5-59.5	7/29/07	ND	ND	ND
TI33	PHTI33-W-24254	60.6-65.6	7/29/07	95	4.3	ND
TI34	PHTI34-W-24353	62.26-67.26	7/30/07	7.8	2.3	ND
TI35	PHTI35-W-24684	65-70	8/1/07	0.5 J	ND	ND
TI36	PHTI36-W-24349	57.7-62.7	7/30/07	ND	ND	ND
TI37	PHTI37-W-24256	53.7-58.7	7/31/07	4.8	0.6 J	ND
TI38	PHTI38-W-24352	55.2-60.2	7/30/07	16	1.8	ND
TI39	PHTI39-W-24691	53.5-58.5	8/3/07	0.6 J	ND	ND
TI40	PHTI40-W-24671	50.89-55.89	8/22/07	3.0	1.1	ND
TI41	PHTI41-W-24695	63.56-68.56	8/3/07	0.6 J	ND	ND
TI42	PHTI42-W-24694	63.71-68.71	8/3/07	0.9 J	ND	ND
TI43	PHTI43-W-24680	59-64	8/1/07	854	25	ND
TI44	PHTI44-W-24685	59.1-64.1	8/2/07	ND	ND	ND
TI45	PHTI45-W-24690	61.3-66.3	8/2/07	ND	ND	ND
Existing KDHE monitoring wells						
KDHEP-1	PHKDHEP1-W-24065	55.1-65.1	7/9/07	542	15	ND
KDHEP-2	PHKDHEP2-W-24165	58.1-68.1	7/14/07	70	4.9	ND
KDHEP-3	PHKDHEP3-W-24069	52-62	7/13/07	5.0	0.6 J	ND
MW4	PHMW4-W-24162	54.7-64.7	7/13/07	2.3	0.3 J	ND
MW5	PHMW5-W-24160	58-68	7/13/07	ND	ND	ND
MW6	PHMW6-W-24164	56-66	7/14/07	0.6 J	ND	ND
MW7	PHMW7-W-24068	46-56	7/13/07	109	6.6	ND
MW8	PHMW8-W-24066	55-65	7/9/07	1.1	0.3 J	ND
MW9	PHMW9-W-24067	52-62	7/9/07	ND	ND	ND
MW10	PHMW10-W-24064	56-66	7/9/07	42	6.5	ND
New CCC/USDA monitoring wells						
MW11	PHMW11-W-24676	55.5-65.5	8/23/07	183	35	ND
MW12	PHMW12-W-24677	50.3-60.3	8/23/07	123	30	ND
MW13	PHMW13-W-24674	51.8-61.8	8/22/07	0.5 J	0.9 J	ND
MW14	PHMW14-W-24670	52-62	8/22/07	ND	ND	ND
MW15	PHMW15-W-24672	59-69	8/22/07	ND	ND	ND
MW16	PHMW16-W-24675	57-67	8/22/07	0.8 J	ND	ND
MW17	PHMW17-W-24673	52-62	8/22/07	ND	ND	ND

TABLE 3.2 (Cont.)

Location	Sample	Depth (ft)	Sampling Date	Concentration (µg/L) Carbon Tetrachloride	Chloroform	Methylene Chloride
Private wells						
Kickapoo	PHKICKAPOO-W-24701	–	8/23/07	ND	ND	ND
Schuetz, B.	PHSCHUETZ-W-24700	–	8/23/07	ND	ND	ND
Smith, L.	PHSMITH-W-24678	–	8/23/07	ND	0.4 J	ND

[a] ND, not detected at an instrument detection limit of 0.1 µg/L.

[b] Qualifier J indicates an estimated concentration below the purge-and-trap method quantitation limit of 1.0 µg/L.

FIGURE 3.1 Carbon tetrachloride concentrations (maximum at each location) in subsurface soil samples collected during the 2007 investigation at Powhattan. Source of photograph: USDA (2006).

FIGURE 3.2 Chloroform concentrations (maximum at each location) in subsurface soil samples collected during the 2007 investigation at Powhattan. Source of photograph: USDA (2006).

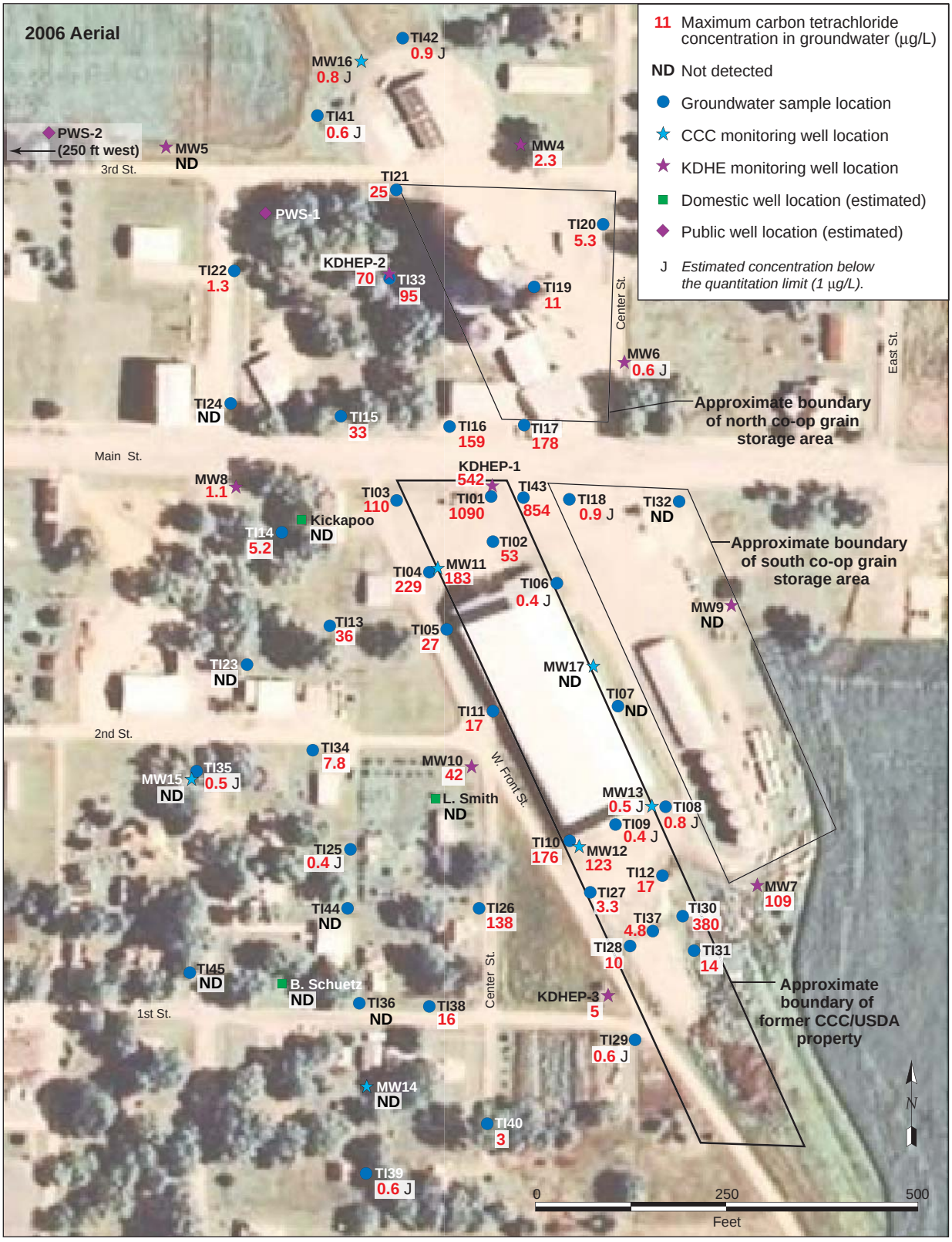

FIGURE 3.3 Carbon tetrachloride concentrations (maximum at each location) in groundwater samples collected during the 2007 investigation at Powhattan. Source of photograph: USDA (2006).

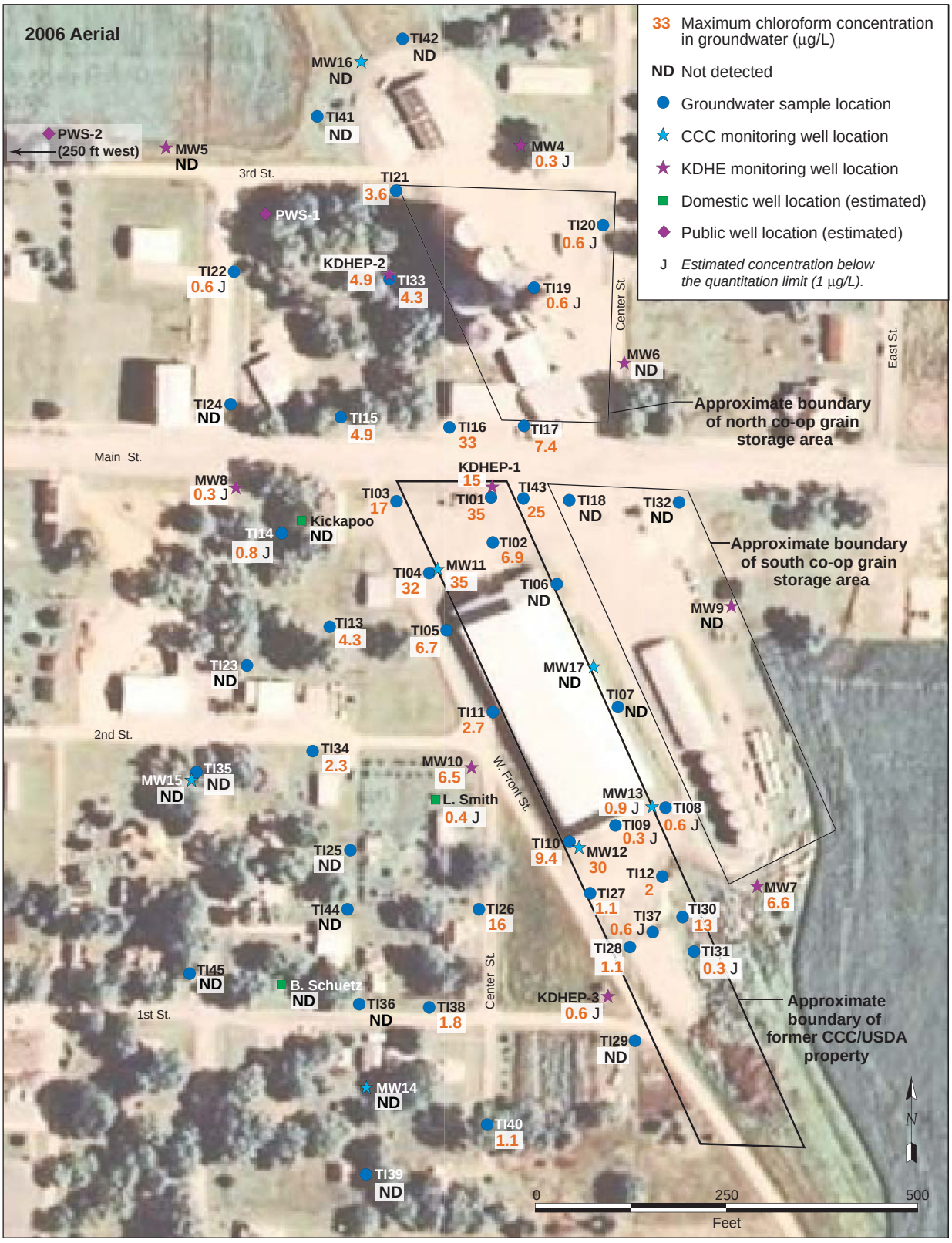

FIGURE 3.4 Chloroform concentrations (maximum at each location) in groundwater samples collected during the 2007 investigation at Powhattan. Source of photograph: USDA (2006).

4 Data Interpretation

The primary purposes of the 2007 investigation at Powhattan were to evaluate potential contaminant source areas on the former CCC/USDA property, determine the horizontal and vertical extent of potential contamination, conduct groundwater monitoring, and provide the technical basis for recommendations for future action. The results of the investigation are detailed below.

4.1 Geologic and Hydrogeologic Conditions

Powhattan lies in the dissected till plains section of the central lowlands physiographic province (Schoewe 1948). The subsurface is composed of till and outwash deposits associated with glacial activities that are characteristic of the Pleistocene Series. These deposits form the primary aquifer in the Powhattan area. The till consists of clay with some variable zones of silt, sand, gravel, and cobbles; the outwash contains poorly to moderately sorted silt, sand, and gravel. Underlying the till and outwash is a gray shale that is part of the Admire Group (Bayne and Schoewe 1967).

The site lithology was identified through the collection of core samples from CPT locations TI01-TI12, and TI18. Included in Appendix A are the detailed lithologic descriptions. Five stratigraphic cross sections were developed from the lithologic descriptions, at the locations shown in Figure 4.1. The cross sections are included as Figures 4.2-4.6.

The predominant lithology consists of a gray-brown to light brown, non-calcareous, silty clay with some evidence of iron staining and iron nodules. This silty clay layer ranged from approximately 52 ft to 64 ft thick. At various depths (23.5-56 ft BGL), white carbonate inclusions were observed in all cored boreholes, as indicated in the lithology logs in Appendix A.

The silty clay layer is underlain by a thin zone of silty sandy clay, sandy clay, and trace silty sand. This zone was evident at locations TI01-TI03, TI07-TI09, TI11, and TI18. This thin zone, encountered at depths ranging from 42 ft BGL (TI04) to 73.58 ft BGL (TI24), produced limited quantities of water under semi-confined conditions. Although CPT refusal was encountered at the base of this water-producing zone, no evidence of bedrock material was observed in any core sample. Historical data from existing monitoring wells indicate that light gray to blue-gray shale is present at depths of 61-67 ft BGL.

The historical data for previously existing KDHE monitoring wells have consistently indicated a groundwater flow divide along Main Street (KDHE 2006a). The groundwater levels measured in the expanded monitoring well network during the CCC/USDA's 2007 investigation indicate a divide that is slightly farther south of Main Street and trends northwest to southeast. Figures 4.7, 4.8, and 4.9 show potentiometric surface maps and flow directions, based on data collected on July 29, 2007; January 4-7, 2008; and February 8, 2008, respectively.

The present-day configuration of the groundwater contaminant plume strongly suggests that groundwater flow was previously influenced by the pumping of public water supply wells PWS 1 and PWS 2, located northwest of the former CCC/USDA property. These wells were removed from service in 1995. The contaminant plume migration direction in the northern part of the investigation area has been northwest to northeast. The northwestern migration likely reflected the previous pumping of the abandoned public water supply wells, while the northeastern migration is representative of the current-day groundwater flow patterns shown in Figures 4.7, 4.8, and 4.9. Groundwater levels in the southern part of the investigation area indicate a south-southwesterly flow direction, which the groundwater contaminant plumes appear to follow.

The present water level data indicate the presence of two areas with relatively high groundwater elevations to the northwest (wells MW5 and MW8) and southeast (well MW7) of the recently constructed grain storage building on the former CCC/USDA property. Flow is generally to the northeast from MW5 and MW8 and to the southwest from MW7. Lower groundwater elevations occurred between MW7 and MW8 at wells MW12, MW13, and MW17 (Figures 4.8 and 4.9). The elevations along this northwest-to-southeast line of wells (MW8-MW17-MW12-MW13-MW7) indicate the presence of a "saddle" pattern (an area of low groundwater elevations bordered by areas of higher elevations on either side). The data suggest that this pattern might reflect local variations in the influence of recharge across the study area. Minimal surface coverage by buildings and parking lots is found near the high-elevation locations, MW7 and MW5/MW8. In contrast, the grain storage bin with its concrete floor and adjacent large gravel-packed aprons cover much of the surface near wells MW12, MW13, and MW17. The greater natural grass cover near MW7 and MW5/MW8 might permit more effective recharge to the underlying aquifer than is possible near MW12, MW13, and MW17.

Water levels recorded by data loggers installed in the monitoring wells indicated an overall rise in the groundwater levels across the site since the automated monitoring began in

2005. Hydrographs developed from the data (Figure 4.10) show that water levels rose by almost 11 ft in some wells during 2007. Groundwater level traces were similar for all wells, showing coincident declines and rebounds throughout the monitoring period.

From mid February to early June 2007, the water levels rose by more than 7 ft at all monitoring locations. This rise was followed by a decline over the summer months. In late August, the trend was reversed as the levels began to rebound. The levels continued to rise with shorter periods of decline through the remainder of 2007. The general trends observed and the periodic individual, transient "spikes" appear to be correlated with an overall increase in rainfall and specific heavy rainfall events.

Daily rainfall totals at Powhattan are included in Figure 4.10. As expected, periods of heavy rain were followed by rapid rises in groundwater levels. Data collected at wells MW5, MW7, and KDHEP-2 suggest that recharge from rainfall events was greater in these wells. From about mid February to early June 2007, groundwater levels in these wells rose by amounts between 9 ft and nearly 10 ft. In contrast, the groundwater levels in wells KDHEP-1, KDHEP-3, MW4, MW6, MW9, and MW10 rose by amounts between > 7 ft and nearly 9 ft. The wells that showed the greatest response to rainfall are in areas predominantly covered with vegetation, and wells that showed smaller responses to rainfall are near roads or on gravel-covered surfaces. The repetition of this response pattern to rain events throughout the year is consistent with the hypothesis that natural recharge is relatively greater in the more open areas of the site, with greater vegetation cover.

4.2 Contaminant Conditions in Subsurface Soil

The methods described in Section 2 were used to collect 196 vertical-profile soil samples from 13 boreholes. Samples were collected at intervals of approximately 4 ft. The analytical results indicate that one area on the former CCC/USDA property exhibits soil contamination at concentrations above regulatory standards.

Soil samples collected in the vadose zone at two locations (TI01 and TI02) near the northeast corner of the former CCC/USDA property contained concentrations of carbon tetrachloride that exceeded the RBSL of 200 µg/kg established by the KDHE for the soil-to-groundwater protection pathway (Figure 3.1 and Table 3.1). Soil samples containing carbon

tetrachloride at concentrations exceeding the RBSL were collected at depths of 38 ft, 42 ft, 46.75 ft, and 50 ft BGL in TI01 and 18-38 ft BGL in TI02. Chloroform was detected at comparable depths but at significantly lower concentrations, none exceeding the RBSL of 960 µg/kg for chloroform in the soil-to-groundwater protection pathway (Figure 3.2 and Table 3.1).

Carbon tetrachloride contamination in soil at concentrations above the laboratory method quantitation limit of 10 µg/kg occurred continuously throughout the soil column at depths of 14-58 ft BGL at TI01 and 18-51 ft BGL at TI02. Trace concentrations (below the method quantitation limit) were also detected at TI02 at depths of 2-7.5 ft, 14 ft, and 54-58.5 ft BGL.

The high carbon tetrachloride concentrations identified, coupled with the detections throughout the soil column, indicate that an ongoing soil source for groundwater contamination exists at locations TI01 and TI02.

Carbon tetrachloride and chloroform were also identified in soil samples collected at locations TI03, TI04, TI10, TI11, and TI18 (Figures 3.1 and 3.2). All of the concentrations were below the RBSL (Table 3.1). All but one of the detections occurred in the lower parts of the boreholes (34-58 ft BGL). The exception was a trace concentration detected in one sample collected at 2 ft BGL in TI10. This pattern is an indication of contaminant migration from a nearby source area. The results suggest that the migration could have occurred through perched groundwater or the thin semi-confined aquifer.

Boreholes TI03 and TI04 are just outside the northwest boundary of the former CCC/USDA property. Borehole TI18 is on Co-op owned property, east of the northeastern corner of the former CCC/USDA property (Figure 3.1). All of these locations are near the source area identified at TI01 and TI02.

Borehole TI10 is at the southwest corner of the recently constructed grain storage building on the former CCC/USDA property. The concentrations and depths of contamination detected at this location indicate that it is near or possibly in a source area.

4.3 Contaminant Conditions in Groundwater

The methods described in Section 2 were used to collect 73 groundwater samples from 45 temporary piezometers, 10 previously existing KDHE monitoring wells, 7 newly installed CCC/USDA monitoring wells, and 3 private wells. The analytical data for groundwater samples indicate that the carbon tetrachloride plume has been constrained.

Four apparently separate plumes of elevated carbon tetrachloride concentrations in groundwater were identified in the 2007 investigation. The configurations of three of these groundwater plumes, coupled with analytical data for soil samples, indicate associations with three separate identified or potential soil source areas on the former CCC/USDA property. The fourth groundwater plume has migrated onto the former CCC/USDA property but originated from a fourth soil source area previously identified by the KDHE (2006a) on the southern Co-op property. The projected plumes are shown in cross sectional views in Figures 4.2-4.6. An interpretative depiction of the horizontal extent of carbon tetrachloride contamination in groundwater is in Figure 4.11, together with carbon tetrachloride concentrations in groundwater samples as reference points. The same depiction of the horizontal extent of carbon tetrachloride contamination in groundwater is in Figure 4.12, together with carbon tetrachloride concentrations in soil samples as reference points.

The four identified plumes and the associated source areas are discussed below. In the discussion, the source areas and plumes are identified as follows (see Figure 4.13):

1. Northern source area and associated plume

2. South-central source area and associated plume

3. Southern Co-op source area and associated plume

4. Potential north-central source area and associated plume

The presently available property documentation relevant to the grain storage facilities at Powhattan was reproduced in Appendix C of the *Work Plan* (Argonne 2007). A summary of this information is in Appendix E of the present document.

4.3.1 The Northern Source Area on the Former CCC/USDA Property and the Associated Plume

The area most significantly affected by the contamination identified during the 2007 investigation is near the northeast corner of the former CCC/USDA property at TI01, TI02, TI43, and KDHEP-1. The concentrations of carbon tetrachloride detected in groundwater in this area ranged from 542 µg/L at KDHEP-1 to 1,090 µg/L at TI01 (Figure 3.3), at depths of 55.1-65.1 ft BGL. These groundwater data, coupled with the analytical data for soil samples collected at locations TI01 and TI02 (Figure 4.12), confirm that this area is a primary source for the contamination detected in the northern part of the former CCC/USDA property. Evidence suggests that this area serves as the source for a *northern plume.*

The portion of the northern plume migrating north-northwestward from the *northern source area* is illustrated in cross section A-A´ (Figure 4.2). This figure illustrates the identified northern source area at TI02 and TI01, emphasizing the migration pathway from surface soil or near-surface soil to groundwater. The stratigraphic section further identifies the location of the downgradient groundwater plume migrating north-northwestward from the northern source area on the former CCC/USDA facility and the contaminant concentrations distributed in this direction.

From the northern source area, the northern contaminant plume has migrated in several directions. Cross section B-B´ (Figure 4.3) illustrates the *west-southwestern* migration pathway from the northern source area identified on the former CCC/USDA property (see cross section location in Figure 4.1). This cross section further illustrates the complexity of the groundwater flow pattern (Figure 4.9) that is the overriding technical factor at this site.

In general, migration to the northwest, north, west, and southwest from the northern source area has been significant, while migration to the east and south has been limited. Easterly and southerly contaminant migration from the primary TI01-TI02 source area is limited to maximum distances of 100-135 ft. This limited migration is again a function of the identified groundwater flow patterns toward the northeast or southwest (Figure 4.9).

The northward plume migration distance from the northern source area is approximately 450-600 ft (Figure 4.2). Migration to the northwest and north is postulated (KDHE 1988a) to have been strongly influenced by pumping of the public water supply wells (PWS 1 and PWS 2), located northwest of this source area (Figures 4.11 and 4.12). Well PWS 1 was in the city park

approximately 425 ft northwest of the northern source area, and PWS 2 was approximately 925 ft to the northwest. Both wells were taken out of service in 1995. After the wells were removed from service, the migration pattern would have been expected to return to the natural northeasterly flow direction identified in this immediate area (Figures 4.7, 4.8, and 4.9).

To the west-southwest, contaminant migration from the northern source extends 325-400 ft (Figure 4.3). The migration has been influenced by the groundwater flow divide identified in the northern part of the former CCC/USDA property (Figures 4.7, 4.8, and 4.9). Flow appears to trend toward the southwest in the area depicted by cross section B-B´ (Figure 4.3).

The extent of the contaminant plume associated with the northern source area was constrained by analytical data for groundwater samples collected from sentinel monitoring wells MW4, MW5, MW6, MW8, and MW16 and temporary piezometers TI06, TI18, TI22, TI23, TI24, TI41, and TI42. Carbon tetrachloride concentrations in all samples collected at these perimeter points were below the RBSL and MCL values of 5.0 µg/L.

Trace to low concentrations of chloroform were detected in some monitoring wells and piezometers in the northern plume, at concentrations up to 35 µg/L. None of these concentrations exceeded the RBSL of 80 µg/L. The highest chloroform concentrations in the area occurred at sampling points TI01 and MW11, which are at and near the identified northern soil source area. The detection of chloroform is an indication that some natural degradation is occurring.

4.3.2 The South-Central Source Area on the Former CCC/USDA Property and the Associated Plume

A second source area, termed the *south-central source area*, is indicated by analytical results for groundwater samples collected at location TI10 and well MW12, at the southwest corner of the recently constructed, active grain storage building (Figures 4.4 and 4.11). The concentrations of carbon tetrachloride detected in groundwater at the southwest corner of this building ranged from 123 µg/L at MW12 to 176 µg/L at TI10 (Figure 4.4), in samples collected at depths of 50.3-60.3 ft BGL. The groundwater analytical data, coupled with the data for soil samples collected at location TI10 (Figure 4.4), support the identification of this area as a source area for the carbon tetrachloride contamination detected in the central part of the former CCC/USDA property.

Cross section C-C´ (Figure 4.4) illustrates the partial soil-to-groundwater pathway found in the identified south-central source area on the former CCC/USDA property. The vertical soil profile recovered at location TI10 strongly suggests that a soil-to-groundwater pathway is present in the area, as do the elevated carbon tetrachloride values in groundwater samples collected at location TI10 and adjacent well MW12. A downgradient plume appears to originate from the southwestern corner (location TI10) of the new Co-op grain storage building. The observed migration in a southwesterly direction is consistent with current hydrologic evidence (Figure 4.9). The presence of a partial surface-to-groundwater pathway at locations TI10 and MW12 suggests that a source area is at or under the southwestern edge of the new Co-op building on the former CCC/USDA property.

The migration direction from the south-central source area is toward the southwest, as indicated by the low contaminant concentrations detected approximately 75 ft to the northeast and south, at upgradient locations TI09, MW13, and TI27 (Figure 4.11). The carbon tetrachloride concentrations at TI09, MW13, and TI27 were below the RBSL and MCL values of 5.0 µg/L.

The contaminant plume from the south-central source area at TI10-MW12 has migrated approximately 400 ft southwestward (Figure 4.4). The downgradient extent was constrained by analytical data for groundwater samples collected from sentinel monitoring well MW14; temporary piezometers TI27, TI36, TI44, and TI45; and the B. Schuetz well (Figure 4.11). Carbon tetrachloride concentrations in all samples collected at these perimeter points were below the RBSL and MCL values of 5.0 µg/L.

Trace to low concentrations of chloroform (up to 30 µg/L) were detected in some monitoring wells and piezometers in the south-central groundwater plume extending downgradient from the recently constructed grain storage building (Figure 3.4). All of the concentrations were below the RBSL value of 80 µg/L. The higher chloroform concentrations occurred at locations TI26 and MW12, at and near the south-central source area at the southwest corner of the building. The detection of chloroform is an indication that some natural degradation is occurring.

4.3.3 Southern Source Area on the Co-op Property, Associated with Contaminant Migration onto the CCC/USDA Property

During an investigation conducted by the KDHE in 2005, two source areas for carbon tetrachloride were identified (KDHE 2006a). One (the source area discussed in Section 4.3.1) was associated with the former CCC/USDA property in the northern part of the Powhattan investigation area, and the other was at the south end of the Co-op property, at or near KDHE sampling locations SB04 and SB05W and KDHE monitoring well MW7 (KDHE 2006a). The KDHE concluded that carbon tetrachloride detected in this southeastern area was associated with the Co-op south grain bins, and that "the Co-op is the sole potentially responsible party for contamination resulting from operations on the eastern side of the facility." The KDHE further indicated that the Co-op had admitted to using carbon tetrachloride at its southern grain bins (KDHE 2006a).

To confirm the data collected by the KDHE, the 2007 investigation included collection of groundwater samples at MW7 and at several locations (TI12, TI28, TI29, TI30, TI31, TI37, TI39, TI40, KDHEP-3) (Figures 4.5 and 4.11) immediately downgradient from the *southern source area* identified on Co-op property by the KDHE. The analytical data indicate that the contaminant plume from the source identified by the KDHE has migrated onto the former CCC/USDA property.

The highest carbon tetrachloride concentrations detected in the groundwater plume emanating from this southern source area on the southern Co-op property were 380 µg/L at TI30 and 109 µg/L at MW7 (Figures 4.5 and 4.11). Significantly lower concentrations were detected immediately to the north at TI12 (17 µg/L), to the south at TI31 (14 µg/L), and to the southwest at TI37 (4.8 µg/L) and TI28 (10 µg/L). Farther downgradient, groundwater samples showed carbon tetrachloride concentrations below the RBSL and MCL values of 5.0 µg/L (Figures 4.5 and 4.11).

Cross section D-D´ (Figure 4.5) was developed by using both KDHE (2006a) data (for SB04, SB05W, and MW7) and data recovered during the 2007 CCC/USDA investigation. The data presented in Figure 4.5 indicate the presence of the southern source area in the southwestern area of the historic southern Co-op grain storage facility. Cross section D-D´ (Figure 4.5) gives clear evidence of a plume moving downgradient toward the west-southwest from the southern Co-op facility, then migrating beneath the former CCC/USDA property and continuing farther downgradient.

The analytical results for groundwater samples collected during the 2007 investigation at locations downgradient from the previously identified source area on the southern Co-op property (KDHE 2006a) confirm the KDHE's interpretation that the Co-op is solely responsible for the contamination in this area. The groundwater plume emanating from this southern Co-op source area is migrating to the southwest; however, constraining the eastern and southern extents of this plume was beyond the scope of the CCC/USDA's 2007 investigation, as was a thorough investigation of the soils in this source area.

4.3.4 Potential North-Central Source Area on the Former CCC/USDA Property

A potential fourth source of contamination was indicated north of the south-central source area (TI10-MW12; Section 4.3.2) by data for groundwater and soil samples collected at location TI11 and groundwater samples from well MW10 (Figures 4.6 and 4.11), though the evidence is not as definitive as that for the other three identified source areas (Sections 4.3.1-4.3.3). Evidence for soil contamination in the potential source area is limited to three trace-level detections of carbon tetrachloride at location TI11 (Figure 4.6).

The carbon tetrachloride detected in groundwater samples collected at TI11 (17 µg/L) and MW10 (42 µg/L) appears to be associated with migration from a source area that potentially extends beneath the grain storage building constructed in 2005 (Figures 4.6 and 4.11). This source area may be separate from other identified source areas. For purposes of this discussion, the potential source area defined by locations TI11 and MW10 is called the *north-central source area*.

The sample from the L. Smith private well, which is between MW10 and the southern plume at and near MW12, contained no detectable carbon tetrachloride. However, the analytical data for the L. Smith well may not be representative of aquifer conditions. Information located after the site investigation (Larsen 2008) confirmed that the L. Smith well is only approximately 31 ft deep, substantially shallower than most of the installations studied during the investigation (approximately 50-70 ft). Consequently, the L. Smith well could be emplaced in a shallower water-bearing unit. The well was also found to have no cover protecting it from infiltration from the surface. Several other key factors, such as well depth, screened interval, and the location and vertical extent of the gravel pack, could substantially affect the usefulness and reliability of data recovered from this private well. The property on which the "L. Smith" well is located has now

been sold. The new owners (Melissa and Rubin Ironhorse Kent) were unaware of the private well when Argonne representatives visited to gather additional information.

Notwithstanding the reservations about the data for the L. Smith well, the contaminant distribution as currently defined (Figure 4.11) and the analytical results for carbon tetrachloride in groundwater samples collected at TI44 (not detected), TI25 (trace), the B. Schuetz well (not detected), and TI45 (not detected) support the interpretation that the north-central source area and the south-central source area are separate entities, as are the associated contaminant plumes.

Cross section E-E´ (Figure 4.6) illustrates the location of the potential north-central source area on the western margin of the former CCC/USDA facility. The elevated contaminant levels found in groundwater at 2007 investigation locations TI11 and MW10 point to the potential north-central source area on the former CCC/USDA facility, beneath the newly constructed (2007) Co-op storage building. Downgradient groundwater contamination identified to the west (location TI34) supports this tentative identification.

The north-central contaminant plume observed at TI11-MW10 has migrated approximately 425 ft west-southwestward from the potential source area beneath the grain storage building (Figure 4.6). The downgradient extent of this plume was constrained by analytical data for groundwater samples collected from sentinel monitoring well MW15 and temporary piezometers TI25, TI35, and TI44. All groundwater samples collected at these perimeter points contained carbon tetrachloride at concentrations below the RBSL and MCL values of 5.0 µg/L (Figure 4.11).

Trace to low concentrations of chloroform (up to 6.7 µg/L) were detected in some monitoring wells and piezometers in the north-central groundwater plume extending downgradient from the recently constructed grain storage building (Figure 3.4). All of these concentrations are below the RBSL value of 80 µg/L. The detection of chloroform is an indication that some natural degradation is occurring.

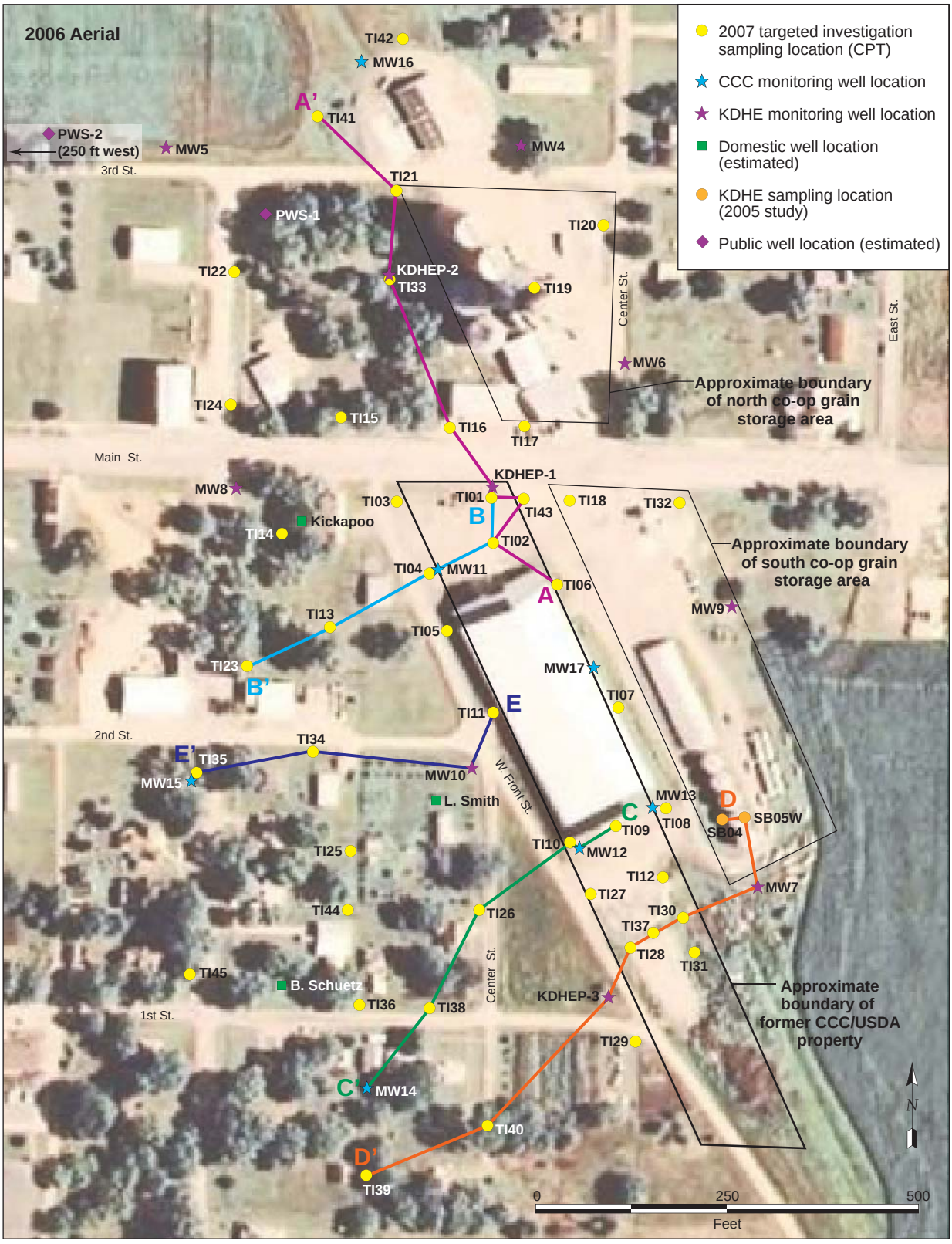

FIGURE 4.1 Locations of hydrogeologic cross sections at Powhattan. Source of photograph: USDA (2006).

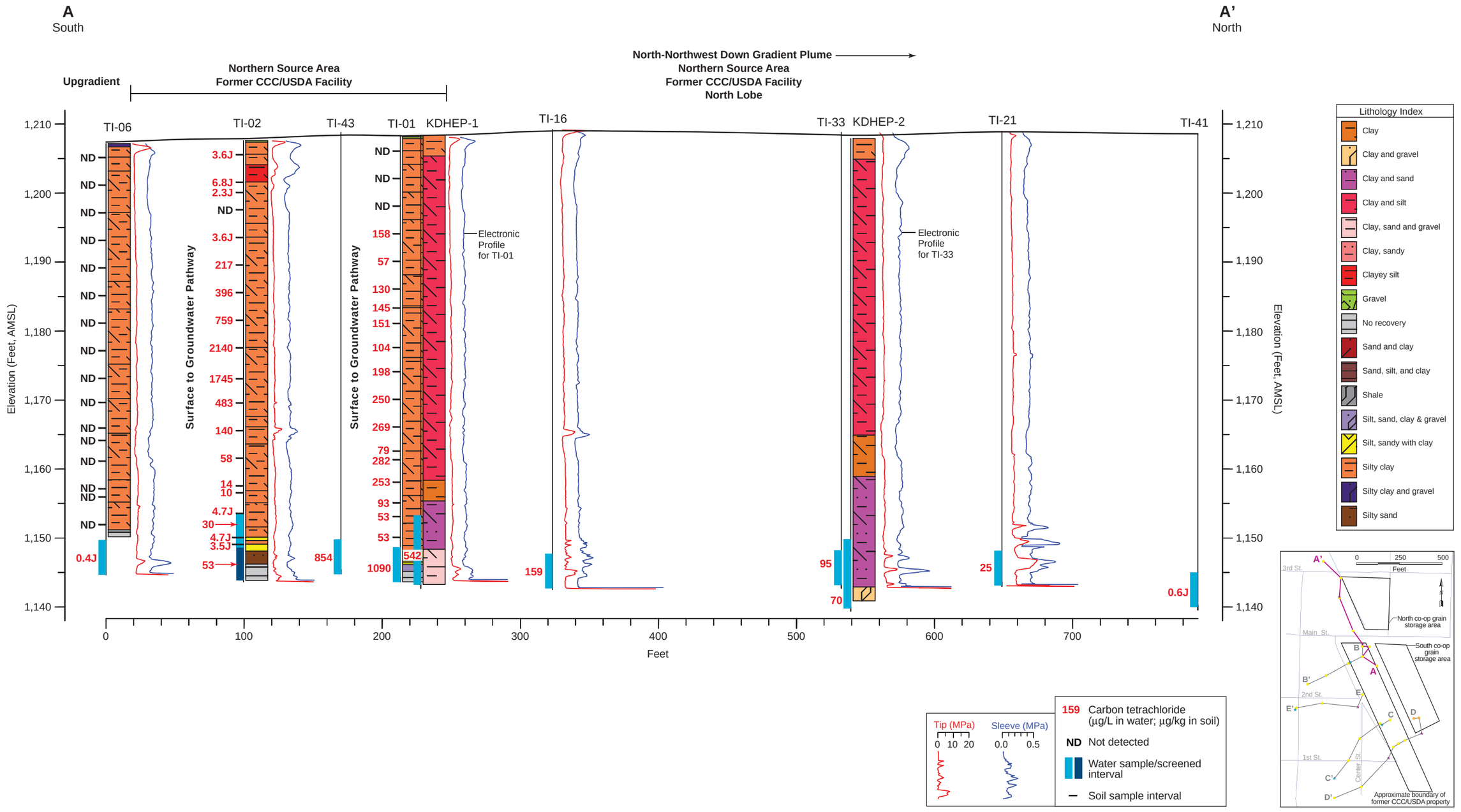

FIGURE 4.2 South-to-north hydrogeologic cross section A-A´ at Powhattan (vertically exaggerated), showing the lateral and vertical distributions of carbon tetrachloride in soil and groundwater to the north of the northern source area on the former CCC/USDA property.

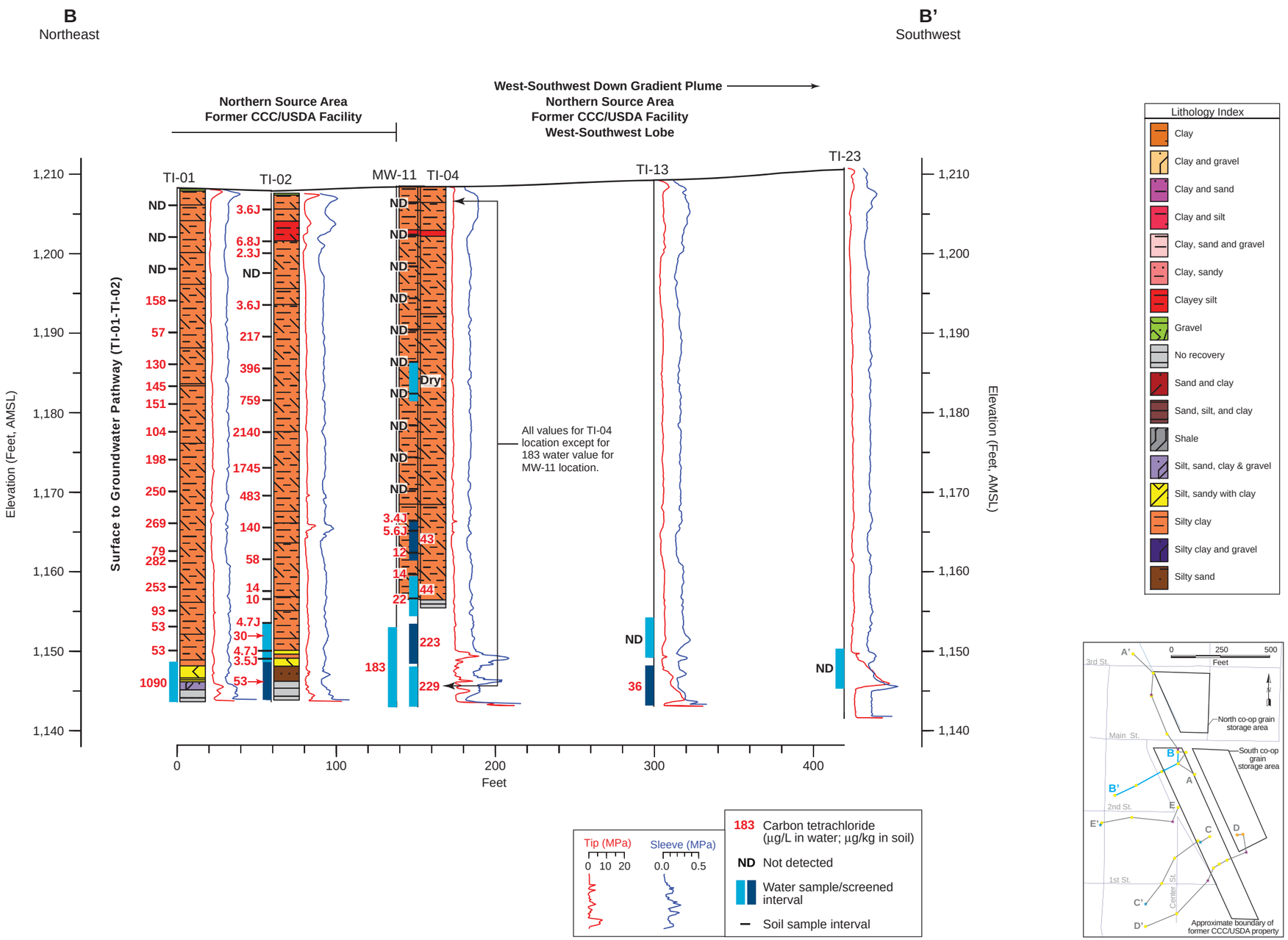

FIGURE 4.3 Northeast-to-southwest hydrogeologic cross section B-B´ at Powhattan (vertically exaggerated), showing the lateral and vertical distributions of carbon tetrachloride in soil and groundwater to the west-southwest of the northern source area on the former CCC/USDA property.

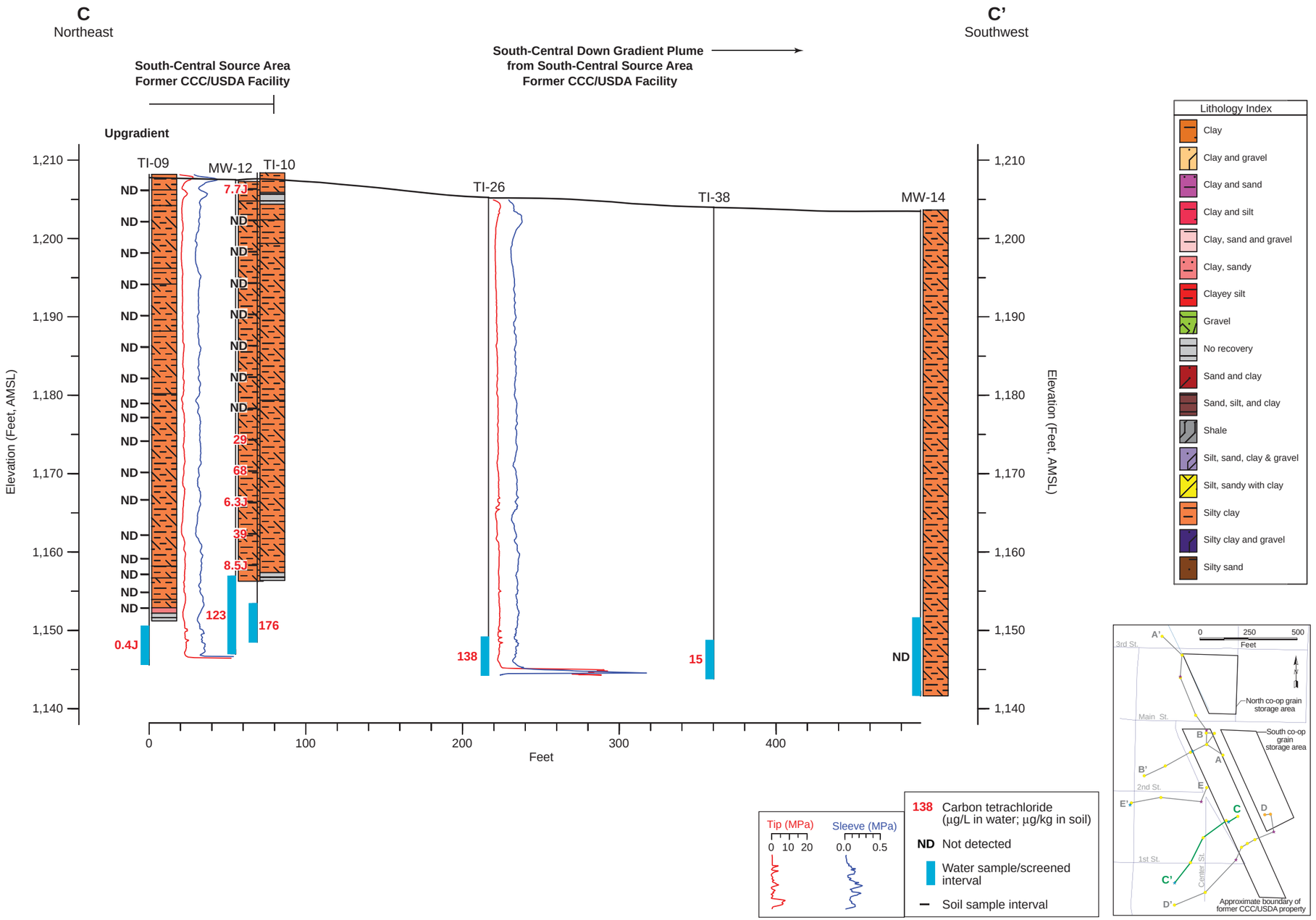

FIGURE 4.4 Northeast-to-southwest hydrogeologic cross section C-C´ at Powhattan (vertically exaggerated), showing the lateral and vertical distributions of carbon tetrachloride in soil and groundwater along the plume emanating from the south-central source area on the former CCC/USDA property.

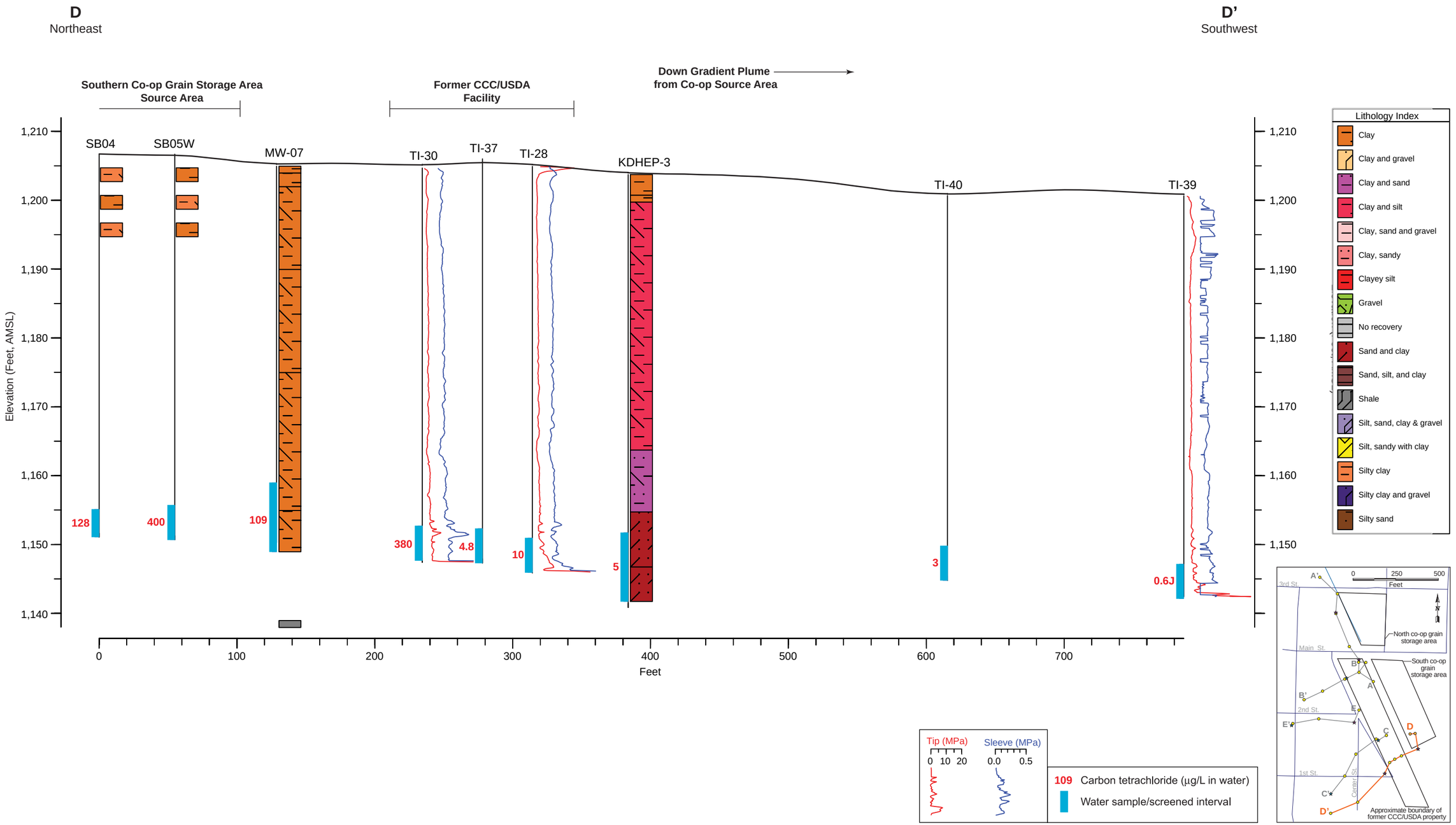

FIGURE 4.5 Northeast-to-southwest hydrogeologic cross section D-D´ at Powhattan (vertically exaggerated), showing the lateral and vertical distributions of carbon tetrachloride in soil and groundwater along the plume emanating from the southern source area on the Co-op property.

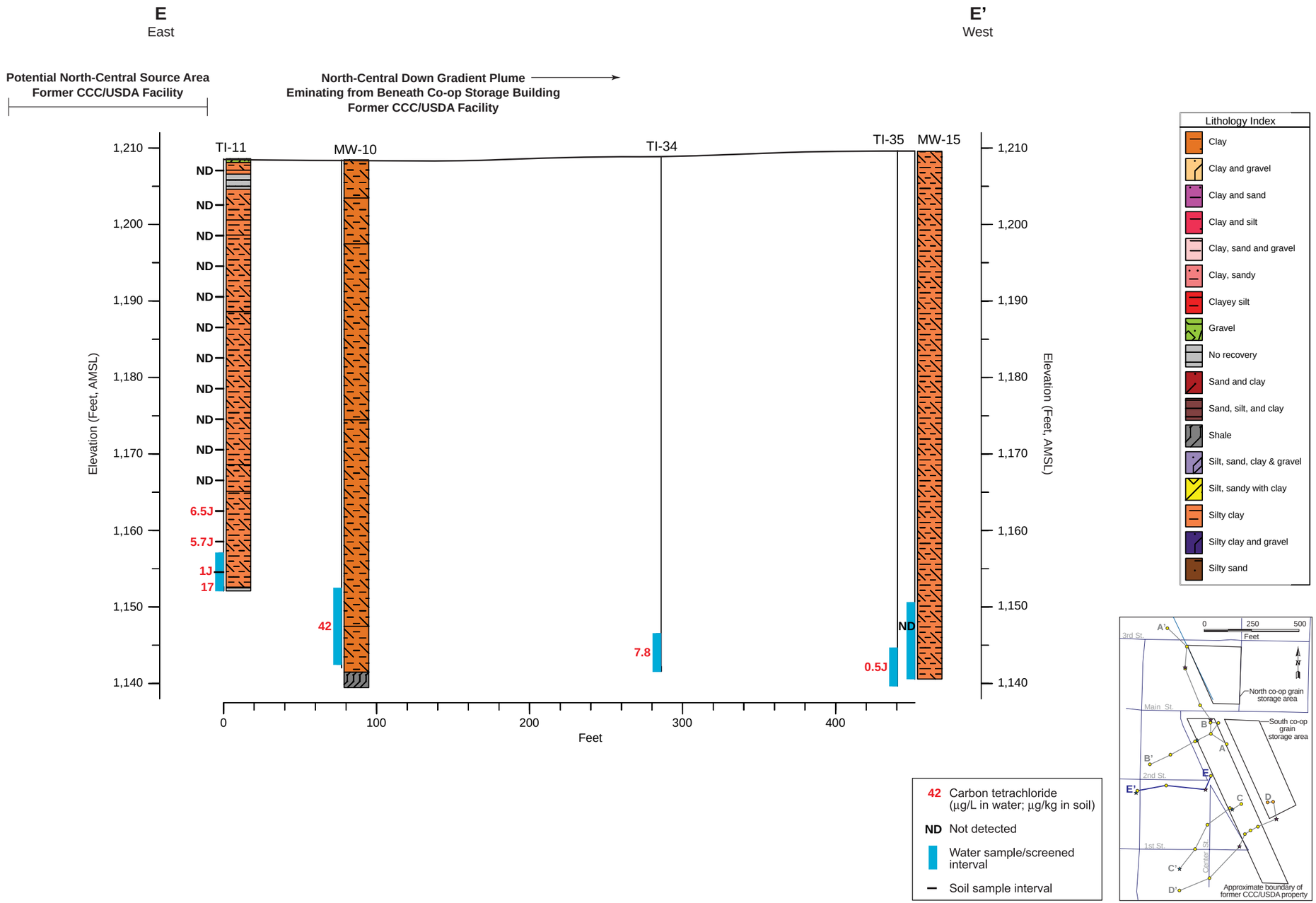

FIGURE 4.6 East-to-west hydrogeologic cross section E-E´ at Powhattan (vertically exaggerated), showing the lateral and vertical distributions of carbon tetrachloride in soil and groundwater along the plume emanating from the potential north-central source area on the former CCC/USDA property.

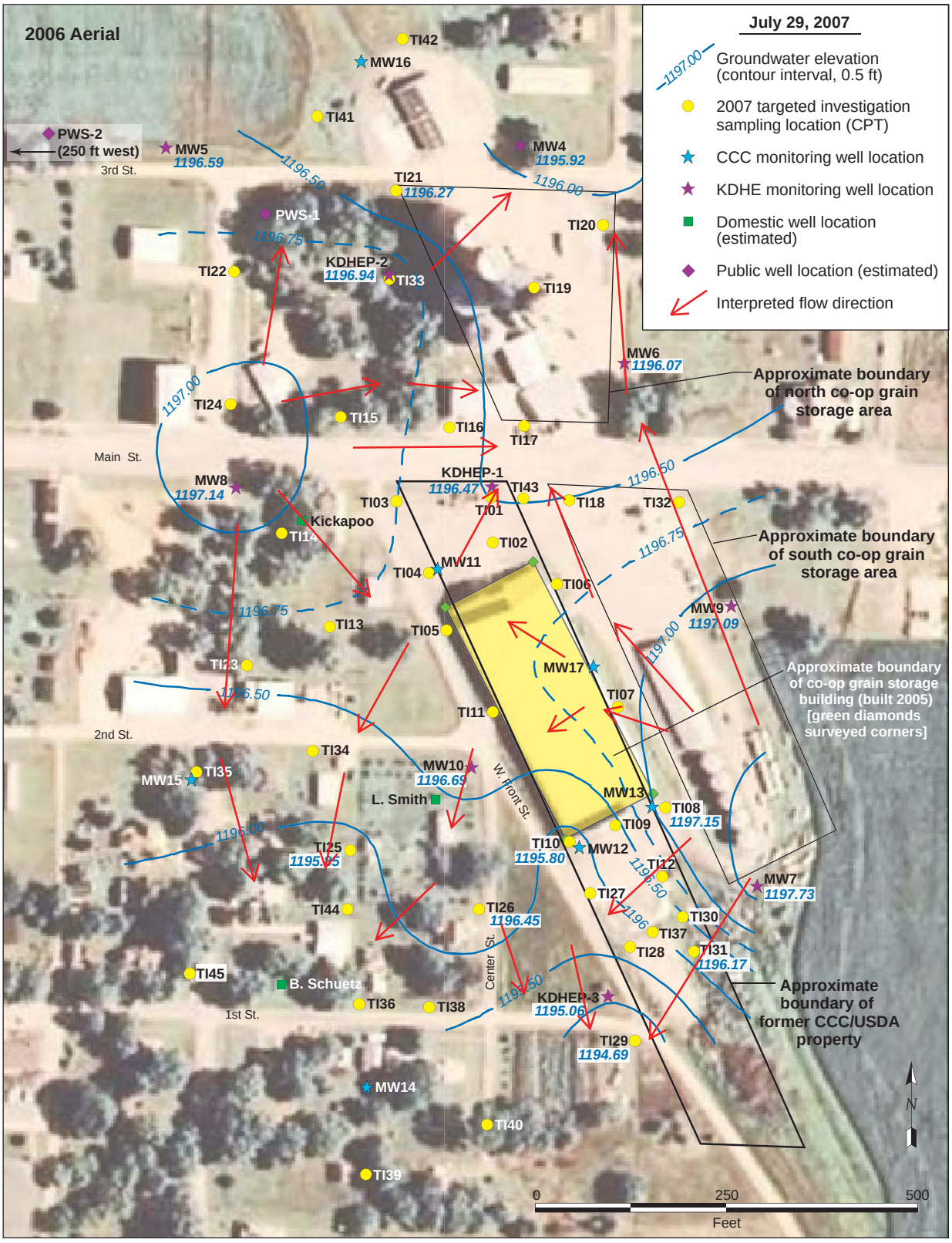

FIGURE 4.7 Groundwater levels, potentiometric surface, and flow direction at Powhattan, July 29, 2007. Source of photograph: USDA (2006).

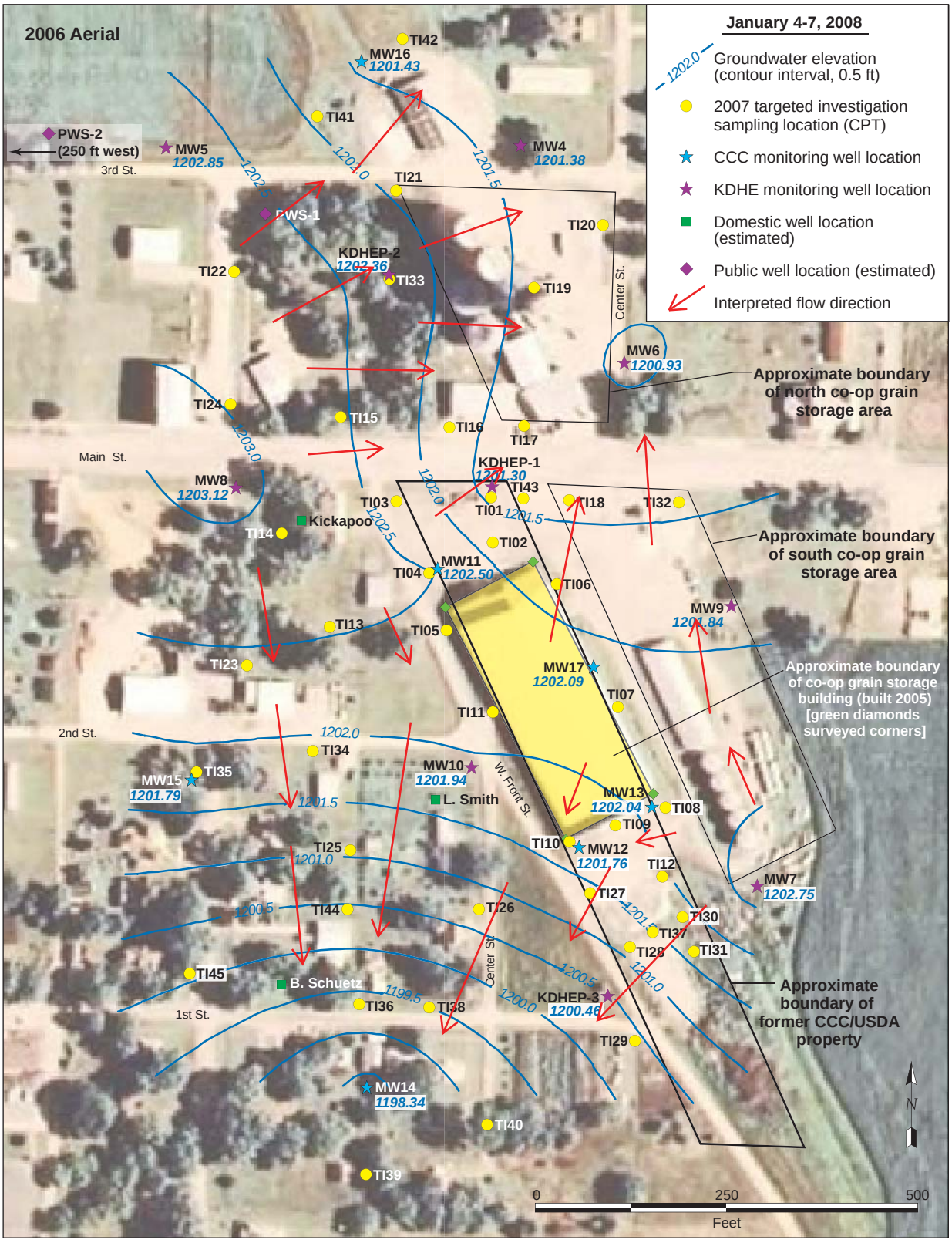

FIGURE 4.8 Groundwater levels, potentiometric surface, and flow direction at Powhattan, January 4-7, 2008. Source of photograph: USDA (2006).

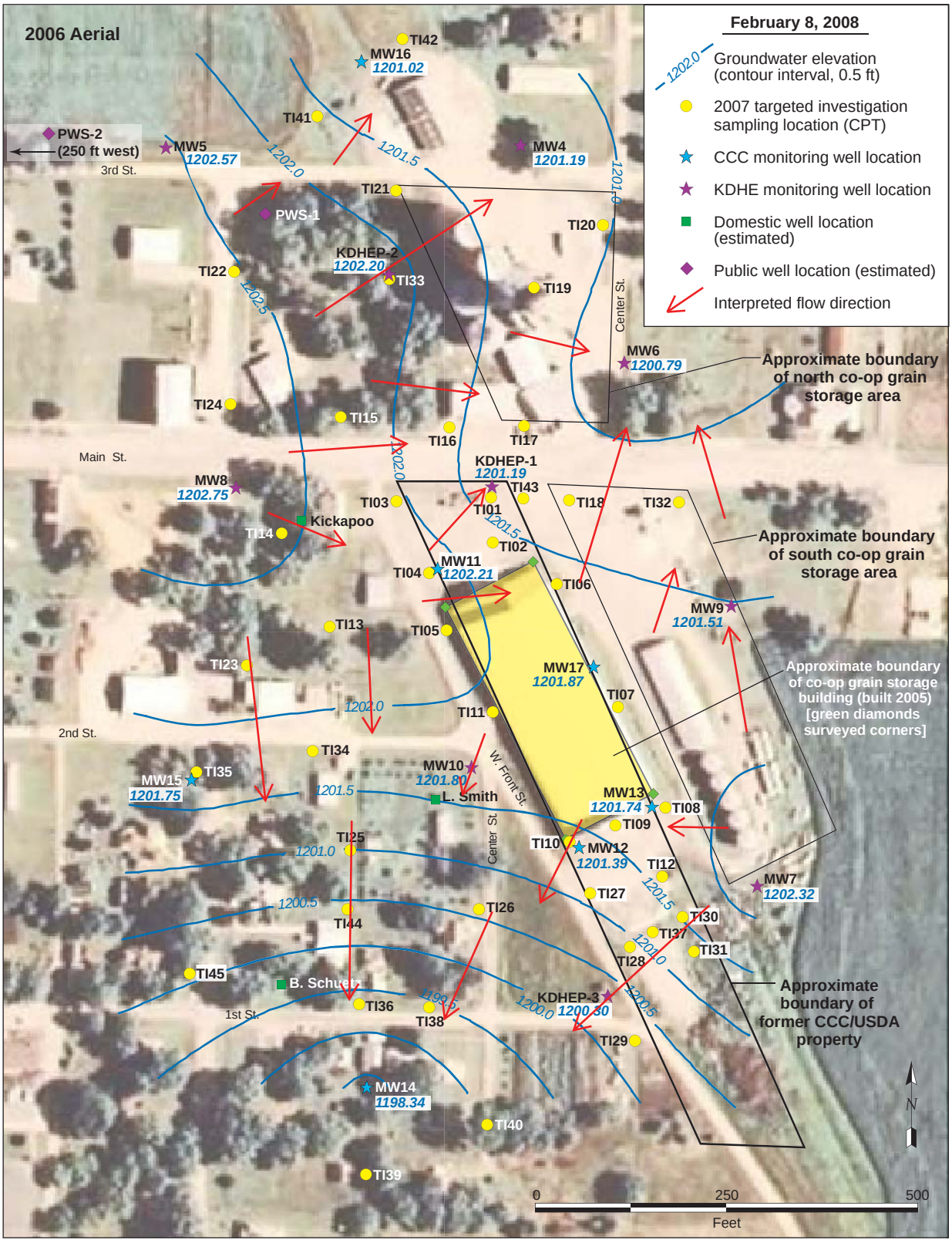

FIGURE 4.9 Groundwater levels, potentiometric surface, and flow direction at Powhattan, February 8, 2008. Source of photograph: USDA (2006).

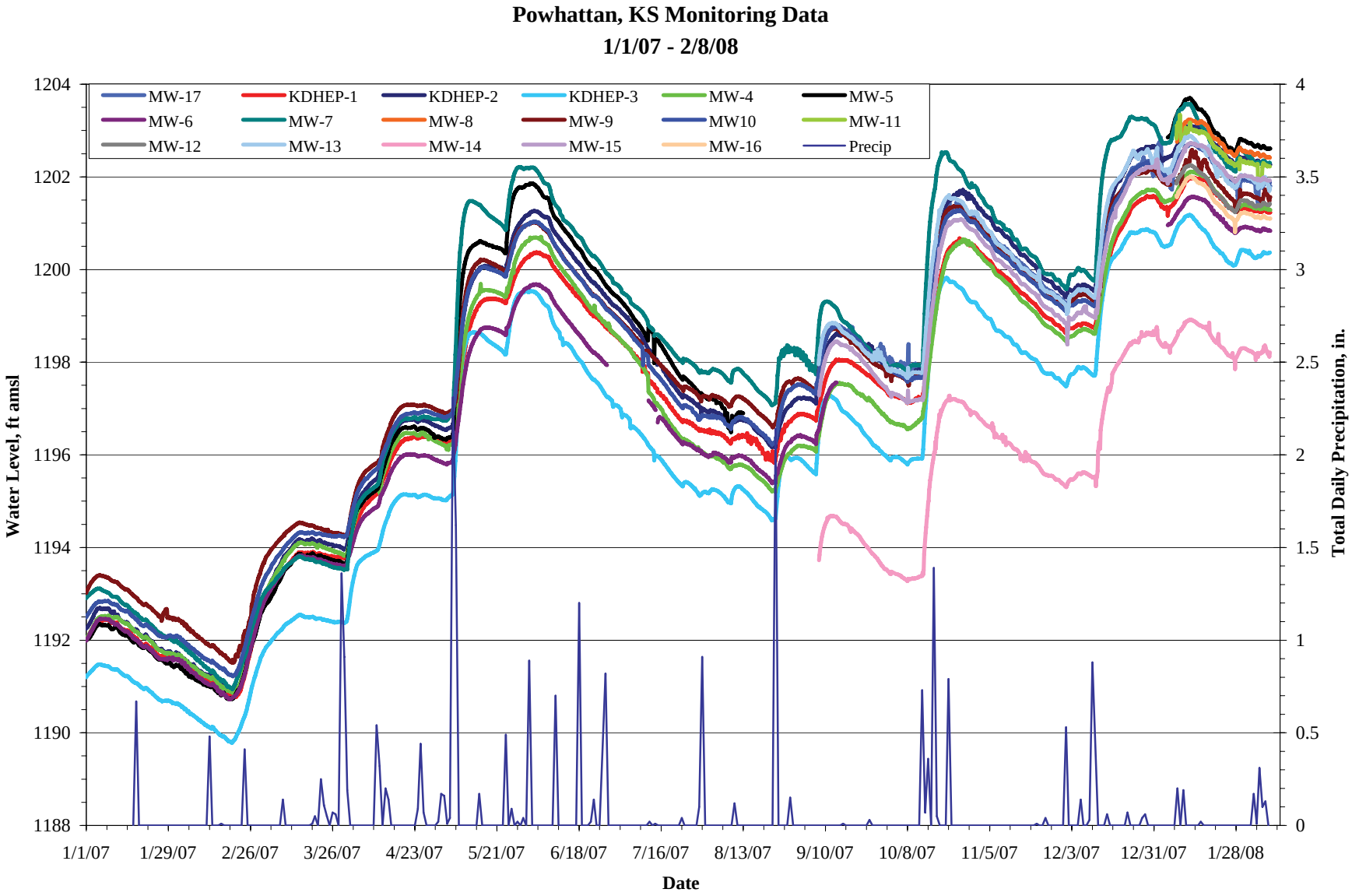

FIGURE 4.10 Hydrographs summarizing the results of long-term water level monitoring at Powhattan, January 2007 to January 2008.

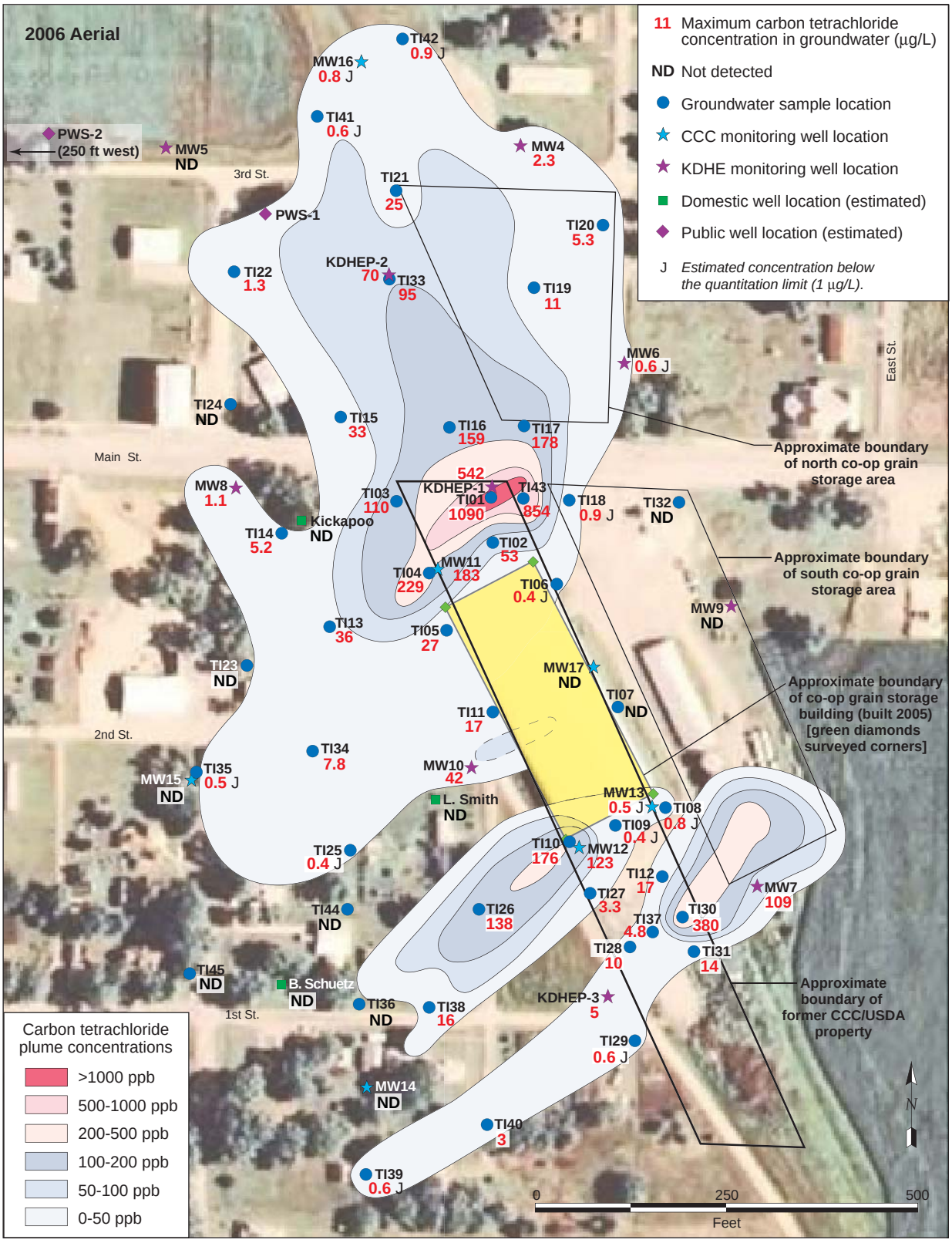

FIGURE 4.11 Interpreted lateral distribution of carbon tetrachloride in groundwater at Powhattan in 2007, with carbon tetrachloride concentrations in groundwater samples (maximum at each location). Source of photograph: USDA (2006).

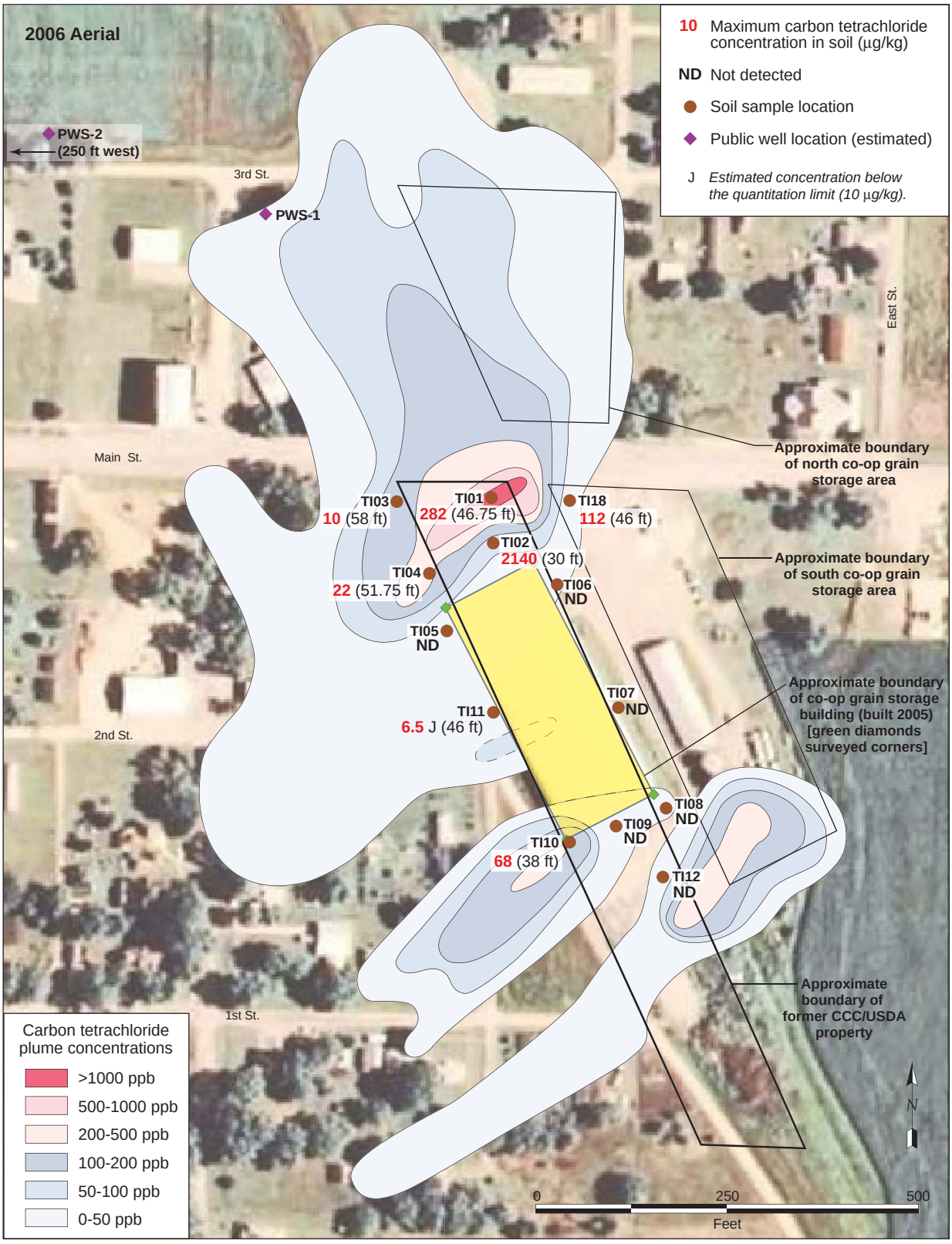

FIGURE 4.12 Interpreted lateral distribution of carbon tetrachloride in groundwater at Powhattan in 2007, with carbon tetrachloride concentrations in soil samples (maximum at each location). Source of photograph: USDA (2006).

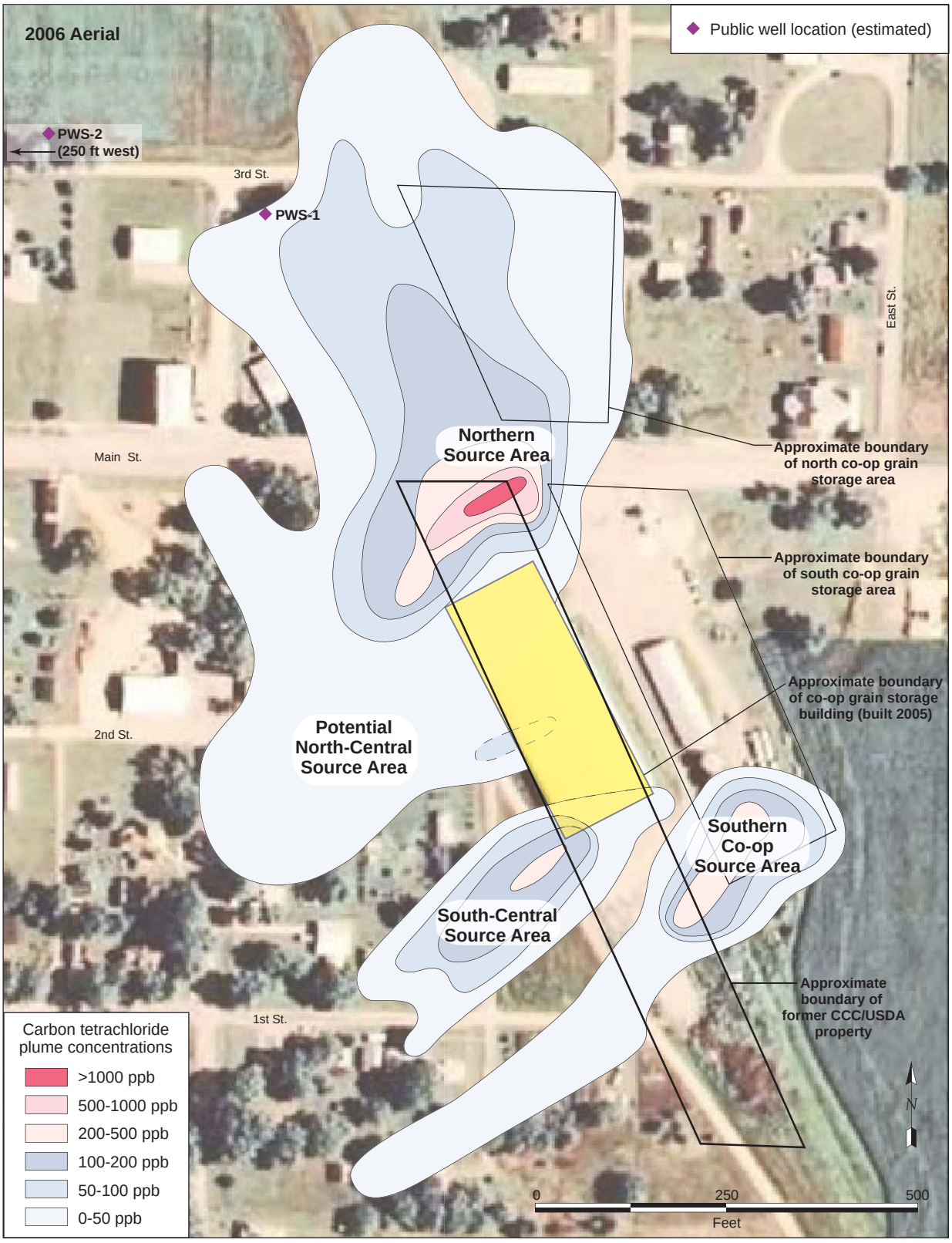

FIGURE 4.13 The four carbon tetrachloride plumes identified in the 2007 investigation at Powhattan. Source of photograph: USDA (2006).

5 Conclusions and Recommendations

5.1 Conclusions

The conclusions related to the analytical data collected on the former CCC/USDA property during the 2007 investigation at Powhattan are as follows:

- *The results indicate the existence of four separate source areas and associated groundwater plumes:*

  - The *northern source area*, in the northern part of the former CCC/USDA property, at and near well KDHEP-1 and targeted investigation locations TI01, TI02, and TI43, shows the highest carbon tetrachloride concentrations. Soil samples collected at TI01 and TI02 contained carbon tetrachloride at concentrations above the RBSL, and carbon tetrachloride concentrations in groundwater samples ranged from 542 µg/L (at KDHEP-1), to 854 µg/L (at TI43), and to 1,090 µg/L (at TI01). The *northern plume*, which emanates from this source area, has migrated in several directions.

  - The *south-central source area* on the former CCC/USDA property is defined by locations TI10 and MW12. These locations are both at the southwest corner of the active grain storage building. Six soil samples from boring TI10 contained carbon tetrachloride, at concentrations up to 68 µg/kg. The *south-central plume* emanates from this source area. Carbon tetrachloride concentrations of 123 µg/L, 176 µg/L, and 138 µg/L were detected in groundwater samples collected at MW12 and TI10 and at downgradient location TI38, respectively.

  - The *southern source area* was identified by the KDHE (2006a) on the southern Co-op property near MW7. This source area is associated with carbon tetrachloride detected in groundwater samples collected during the CCC/USDA's 2007 investigation at MW7 (at 109 µg/L) and at downgradient location TI30 (at 380 µg/L). The *southern plume* emanates from this source area.

- The potential *north-central source area* is indicated by carbon tetrachloride detected in groundwater samples from location TI11 and well MW10 at concentrations of 17 µg/L and 42 µg/L, respectively. This groundwater contamination is interpreted as being associated with a potential soil source area on the former CCC/USDA property, under the recently constructed Co-op grain storage building. Three soil samples from boring TI11 contained carbon tetrachloride at estimated trace concentrations up to 6.5 µg/kg. The *north-central plume* appears to emanate from this potential source area.

- *The high carbon tetrachloride concentrations in the northeast corner of the former CCC/USDA property could potentially be an ongoing source for groundwater contamination.* Soil samples collected at locations TI01 and TI02 contained carbon tetrachloride at concentrations above the RBSL (217-2,140 µg/kg), at depths of 18-50 ft BGL. Lower concentrations (below the RBSL) were detected in samples from several additional intervals in the vertical soil profile at both locations.

- *The boundaries of the carbon tetrachloride groundwater plumes associated with activities on the former CCC/USDA property were constrained.* Carbon tetrachloride concentrations below the MCL and RBSL values of 5.0 µg/L resulted from analyses of groundwater samples collected from sentinel monitoring wells MW4-MW6, MW8, and MW13-MW17. The plume boundaries were further constrained by data for samples from temporary piezometers TI06, TI08, TI09, TI18, TI22, TI23, TI24, TI25, TI27, TI35, TI36, TI39, TI41, TI42, and TI44. Carbon tetrachloride and chloroform levels detected in groundwater samples from all of these perimeter locations were below the MCL and RBSL values of 5.0 µg/L and 80 µg/L, respectively. These data indicate that the horizontal extent of contamination associated with activities on the former CCC/USDA property has been constrained.

- *The distribution of carbon tetrachloride and chloroform observed in both soil and groundwater suggests that some natural degradation has occurred.* Although the chloroform concentrations detected did not exceed the

regulatory standards for soil or groundwater, the presence of chloroform indicates that some degradation is occurring.

- *Groundwater level data confirm the presence of a divide in the vicinity of Main Street and the northern part of the former CCC/USDA property.* Groundwater level data have been collected continuously in selected wells over a period of years. Observations during this period and current groundwater flow maps indicate that the groundwater divide has been persistent over time and has affected contaminant migration. Groundwater flow in the northern part of the site has been generally to the northeast during the monitoring period. South of Main Street, flow trends have been toward the southwest.

- *Historic pumping of the public supply wells northwest of the northern source area on the former CCC/USDA property probably affected groundwater flow and contaminant migration in the past.*

- *The primary water-bearing unit identified during the 2007 investigation is the thin layer of silty sandy clay and silty sand that separates bedrock from the upper silty clay layer.* Limited water was obtained from the semi-confined aquifer. This thin water-producing zone was encountered at various depths, ranging from 42 ft (TI04) to 73.58 ft BGL (TI24).

- *Powhattan residents have access to a public water supply source.* Residents obtain their water from Brown County Rural Water District No. 2. This connection became available to the residents in June 1995.

5.2 Recommendations

The findings of the 2007 investigation are the basis for the following recommendations, which should be considered for the Powhattan site:

- A potentially responsible party analysis should be conducted to determine whether other parties used the former CCC/USDA property to use, store, or dispose of carbon tetrachloride. Current and prior ownership records also need to be confirmed.

- The results of the KDHE's 2005 investigation to differentiate between source areas on the Co-op and former CCC/USDA properties were fully incorporated into the plans for the CCC/USDA 2007 investigation and the interpretation of the results reported here. Subsequently, the Co-op submitted a work plan for and conducted a limited investigation of its own, the results of which have not been made available to the CCC/USDA and Argonne. The Co-op will be preparing a work plan for a more thorough investigation. When the results of both Co-op investigations become available, they should be analyzed and interpreted in relation to the CCC/USDA results reported here.

- Limited remediation of the soil source should be considered as an option for investigation locations TI01 and TI02, in the northeast part of the former CCC/USDA facility (in the northern source area identified in the 2007 investigation).

- Monitoring of the groundwater contamination should be conducted twice yearly in the existing permanent monitoring network.

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Appendix A:

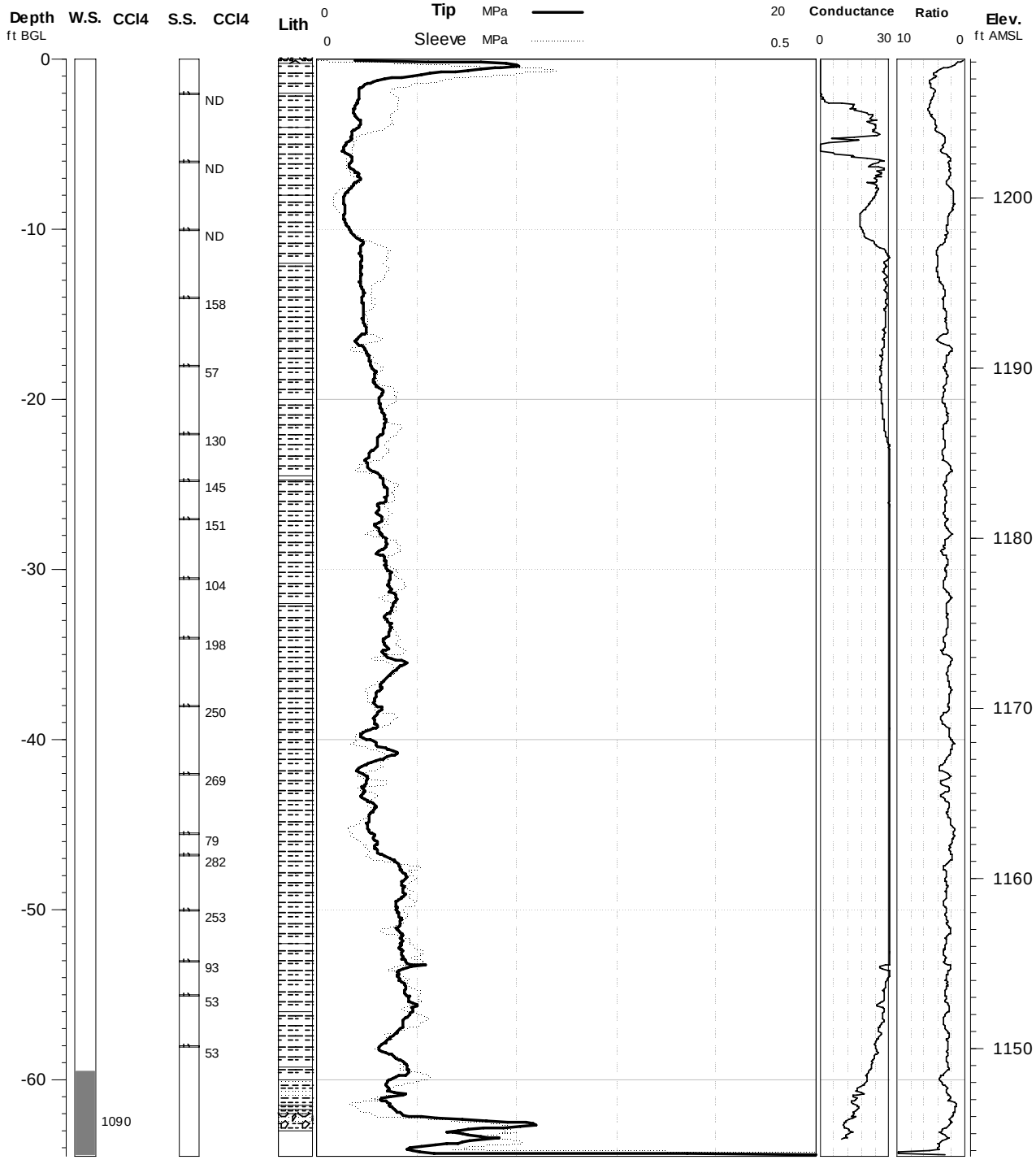
Lithology and Electronic Logs

Argonne National Laboratory

Boring ID: TI-01

Project: Powhattan, KS **Elevation:** 1208.144 ft.

Geologist: Lisa Larsen **Depth:** 64.5 ft BGL **Log Date:** 7/10/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-01

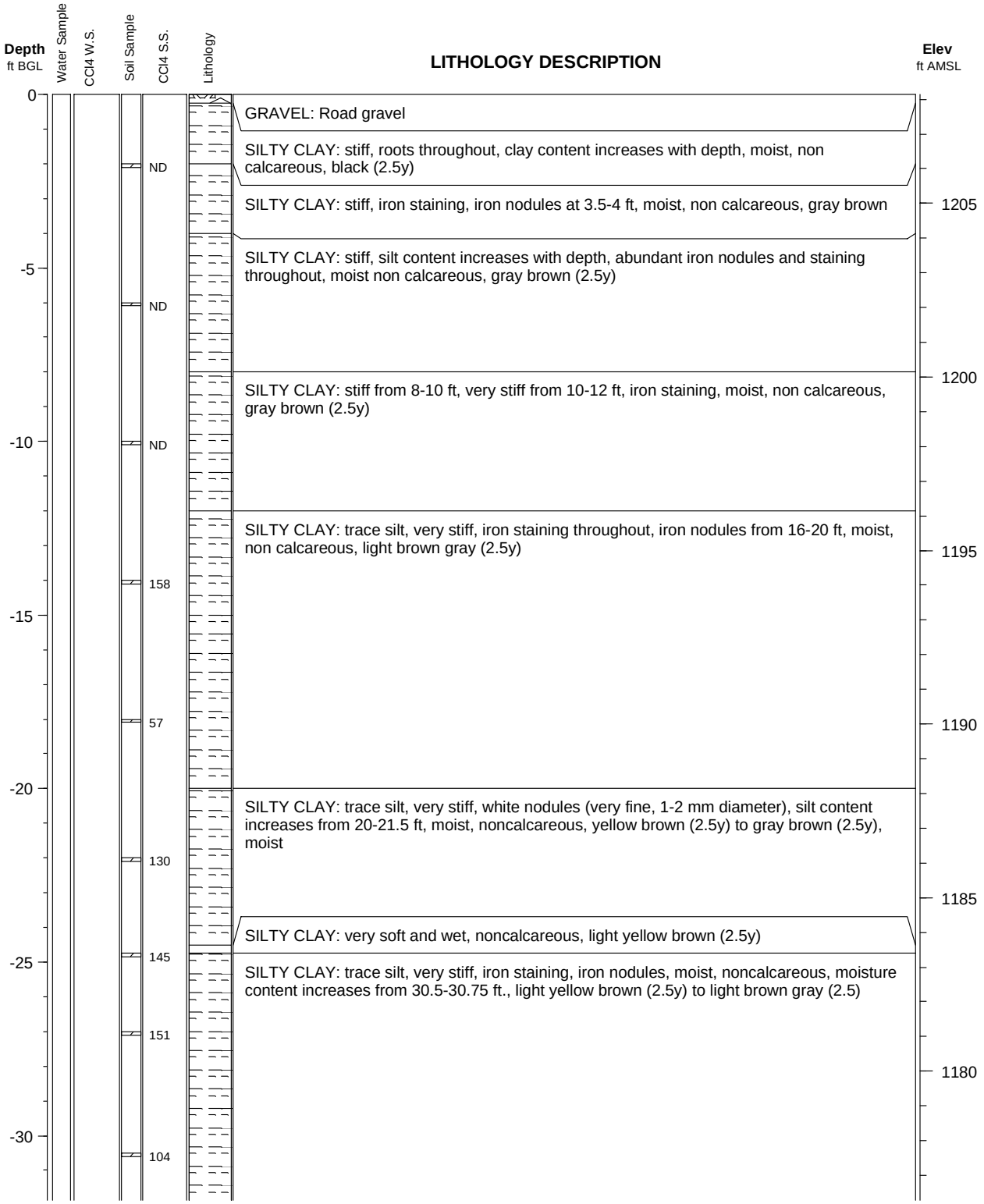
Project: Powhattan, KS

Elevation: 1208.144 ft.

Geologist: Lisa Larsen

Depth: 64.5 ft BGL

Log Date: 7/10/07



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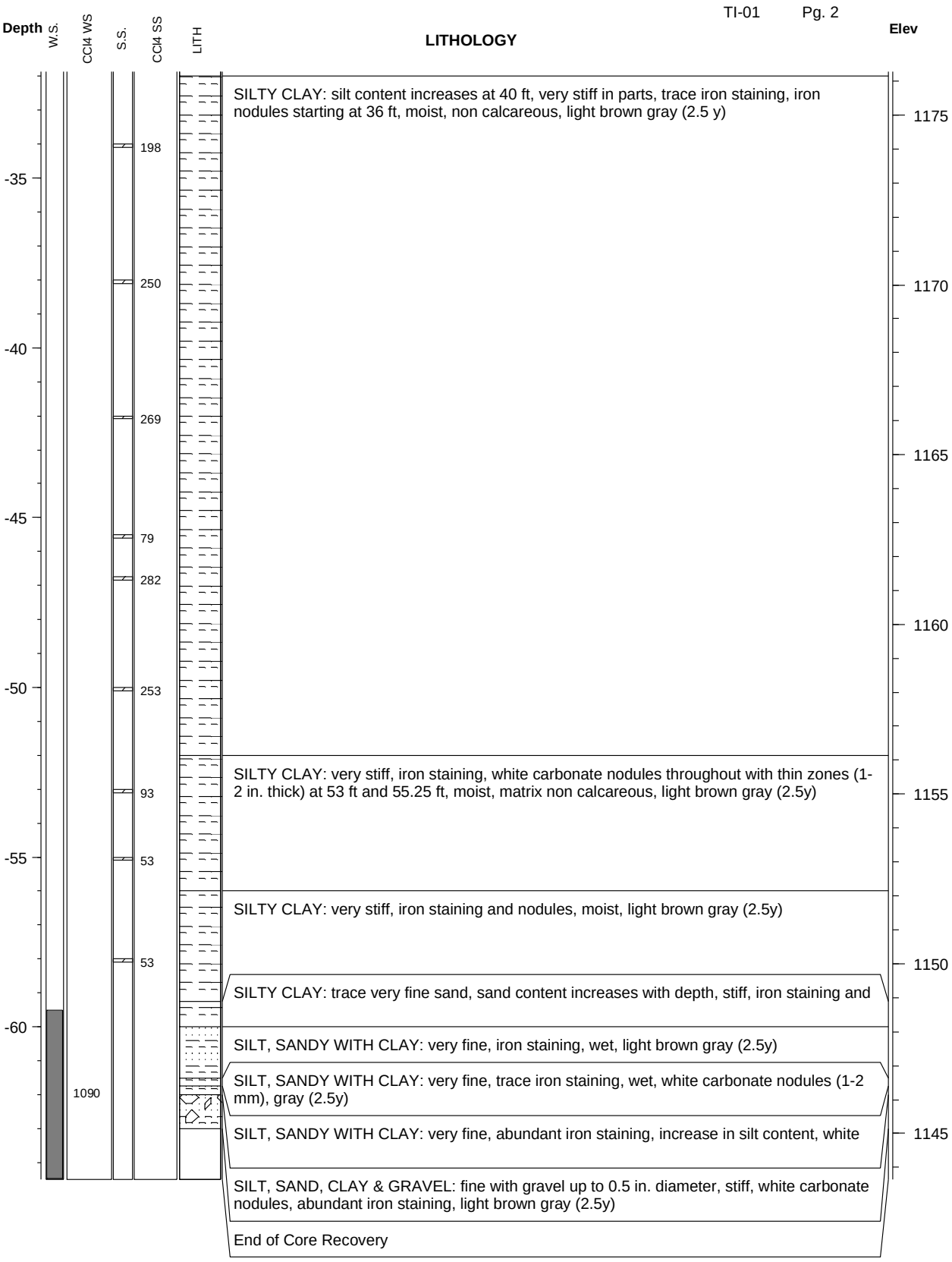
Carbon tetrachloride in soil sample = micrograms/kg



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-02

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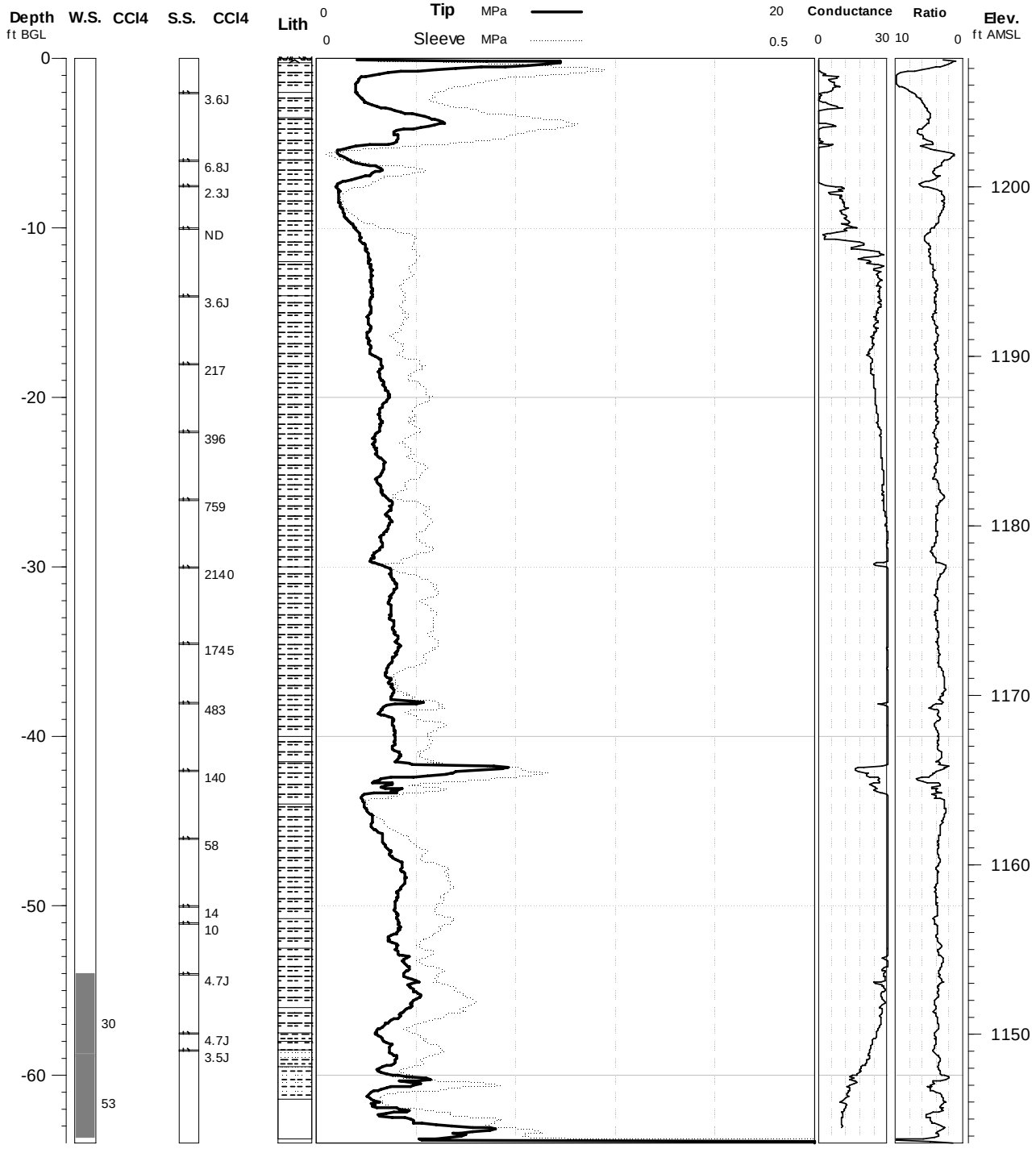
Elevation: 1207.615 ft.
Geologist: Lisa Larsen
Depth: 63.976 ft. BGL
Log Date: 7/11/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-02

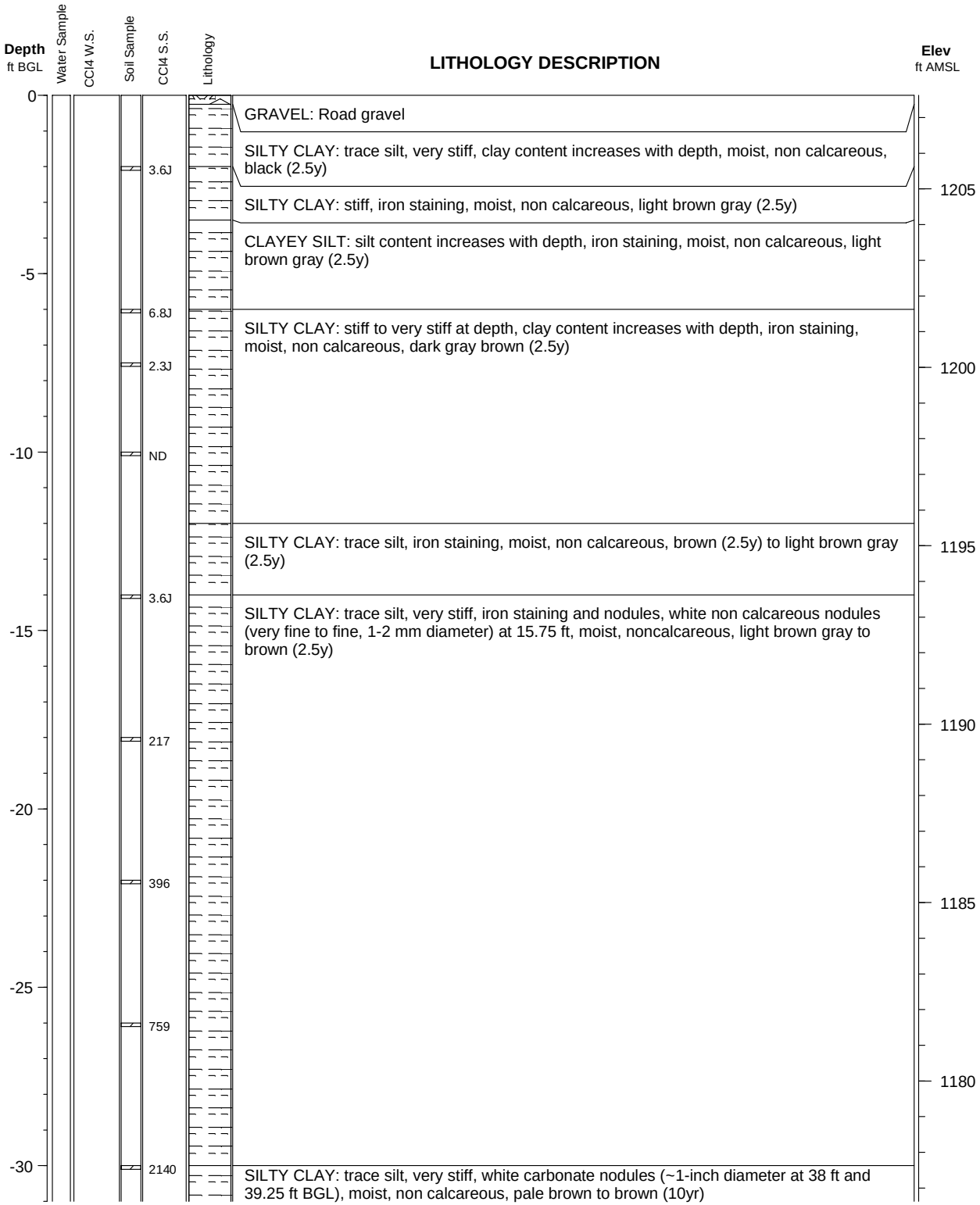
Project: Powhattan, KS

Elevation: 1207.615 ft.

Geologist: Lisa Larsen

Depth: 63.976 ft. BGL

Log Date: 7/11/07



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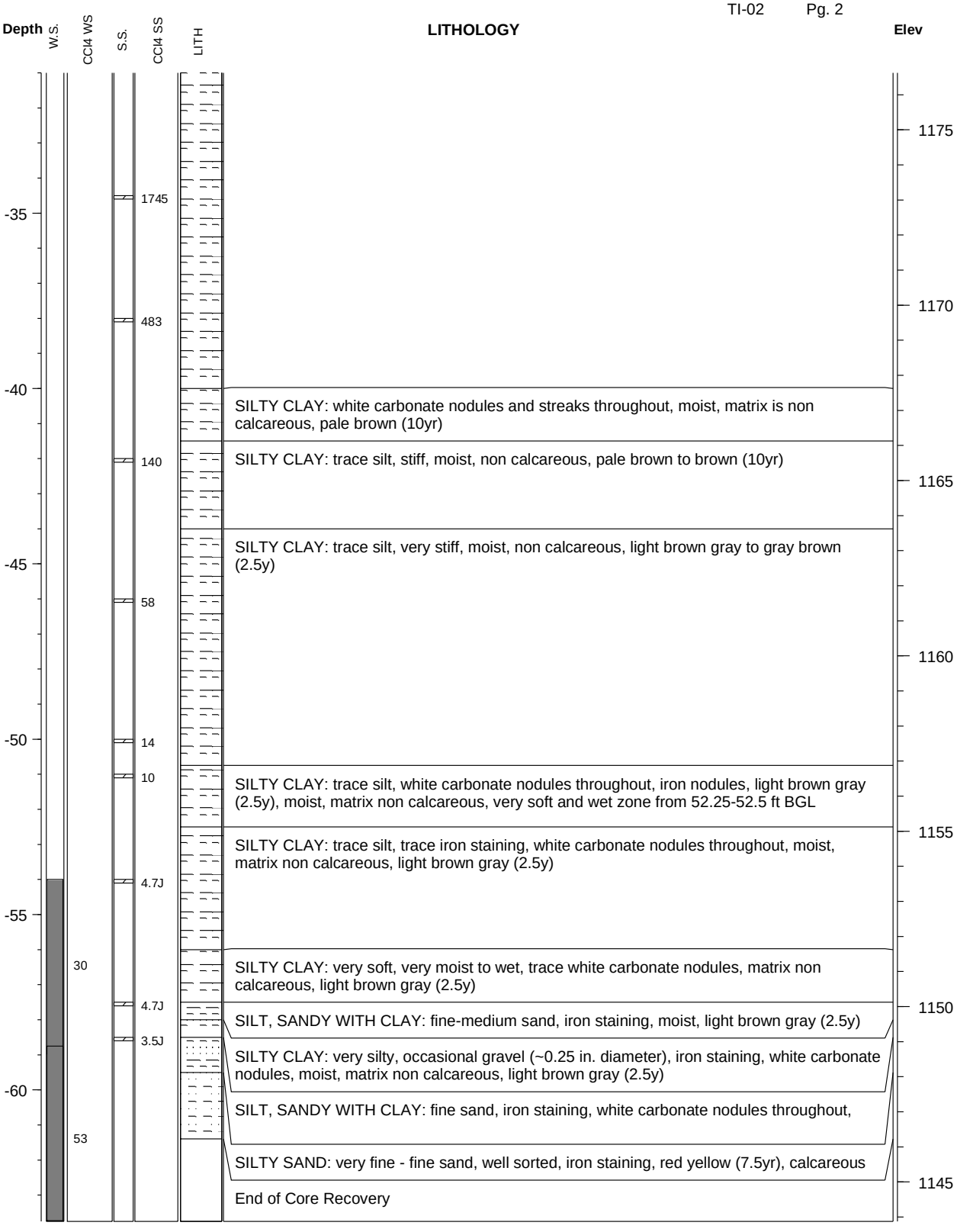
Carbon tetrachloride in soil sample = micrograms/kg

TI-02 Pg. 2



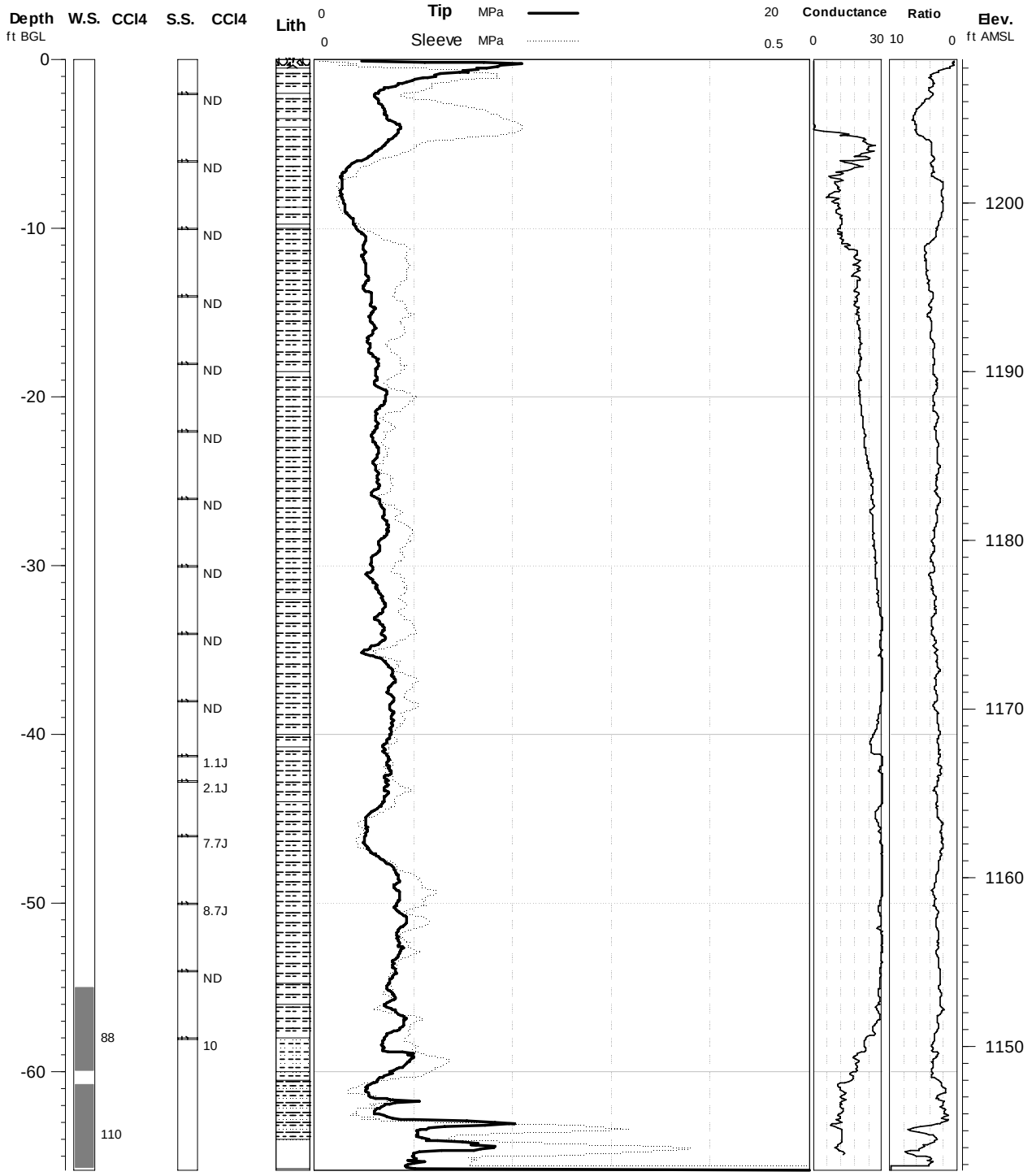
Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-03

Project: Powhattan, KS **Elevation:** 1208.5 ft.

Geologist: Lisa Larsen **Depth:** 65.813 ft. BGL **Log Date:** 7/11-12/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-03

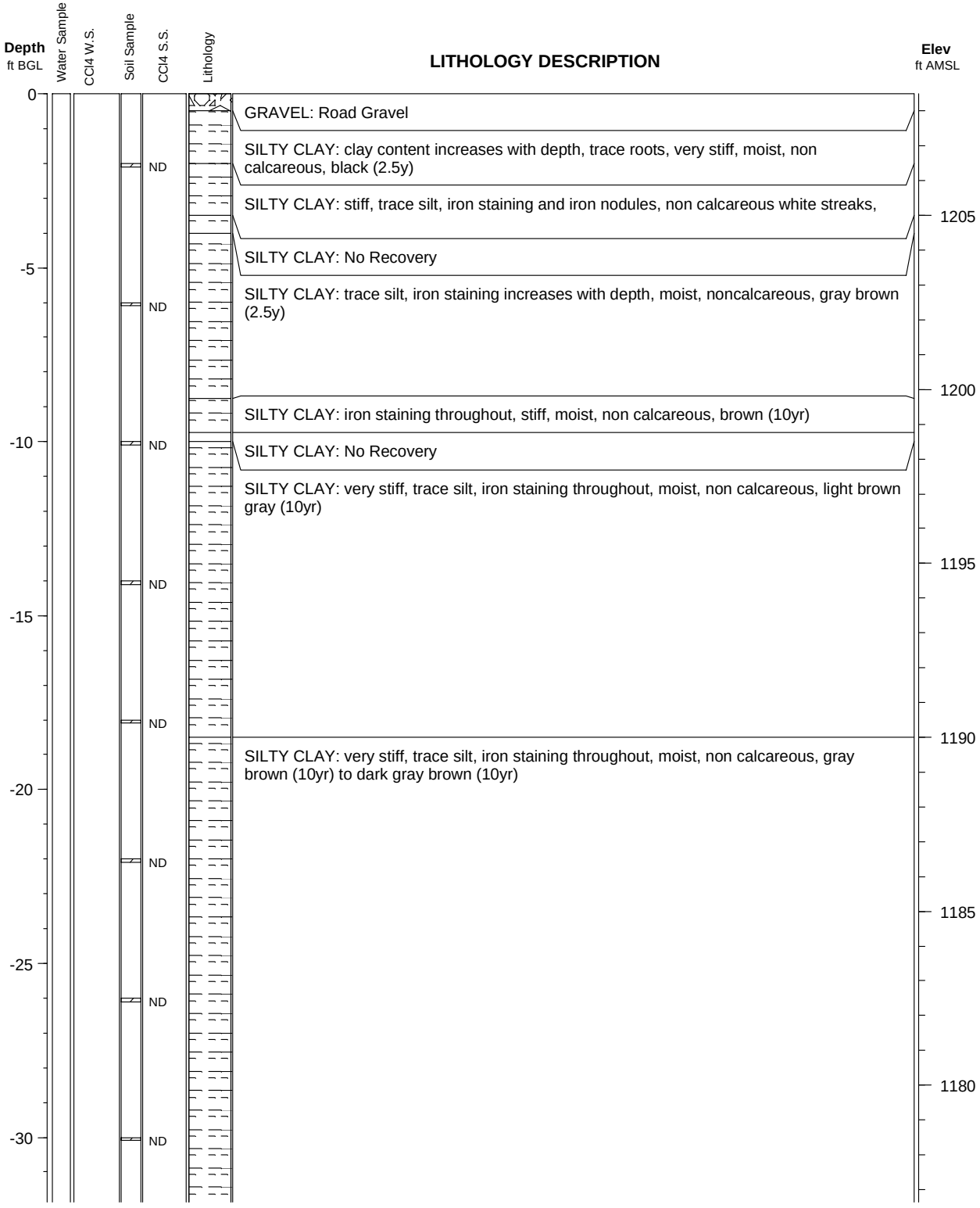
Project: Powhattan, KS

Elevation: 1208.5 ft.

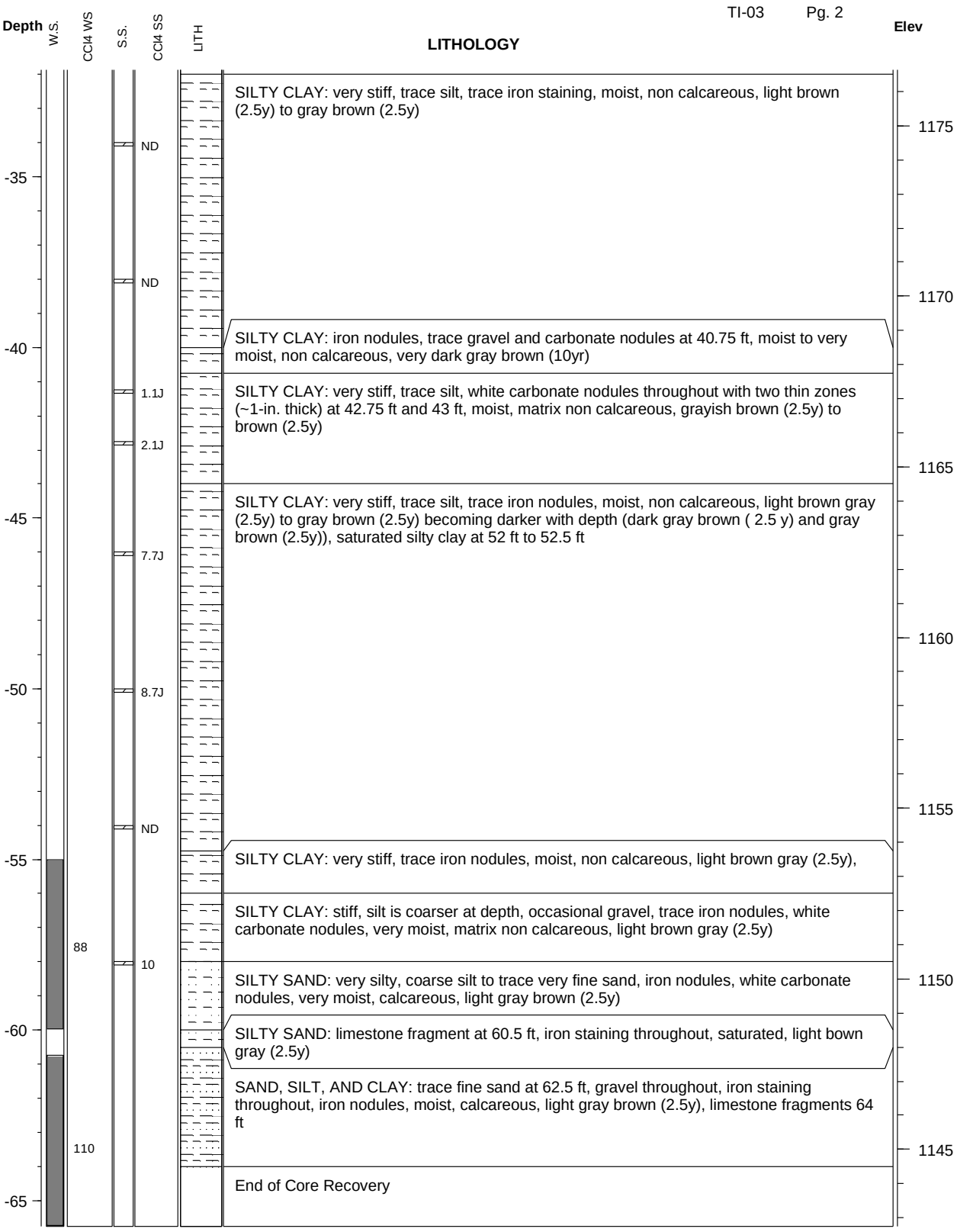
Geologist: Lisa Larsen

Depth: 65.813 ft. BGL

Log Date: 7/11-12/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

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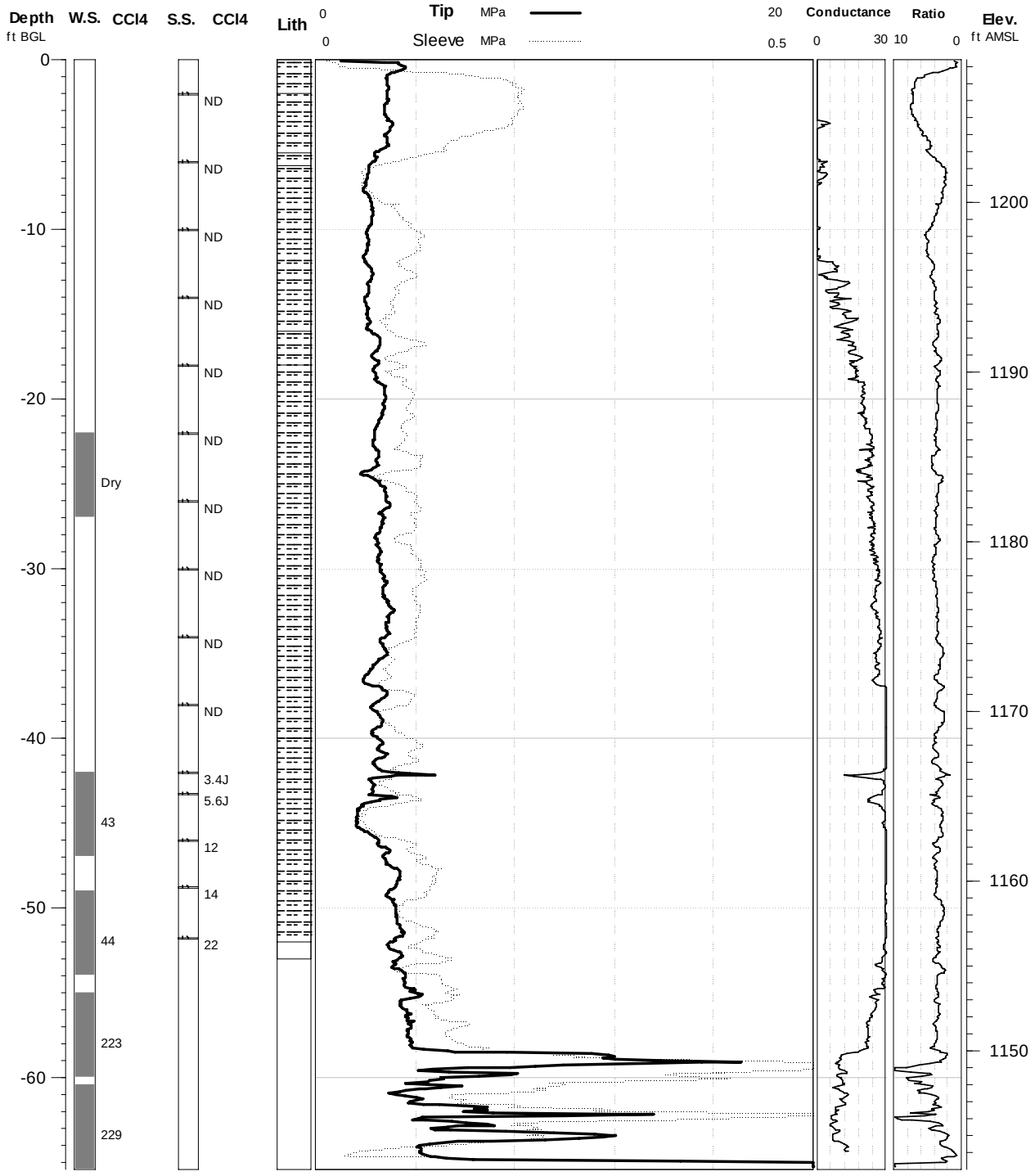
Project: Powhattan, KS

Elevation: 1208.446 ft.

Geologist: Lisa Larsen

Depth: 65.4 ft BGL

Log Date: 7/12-13/07



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Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-04

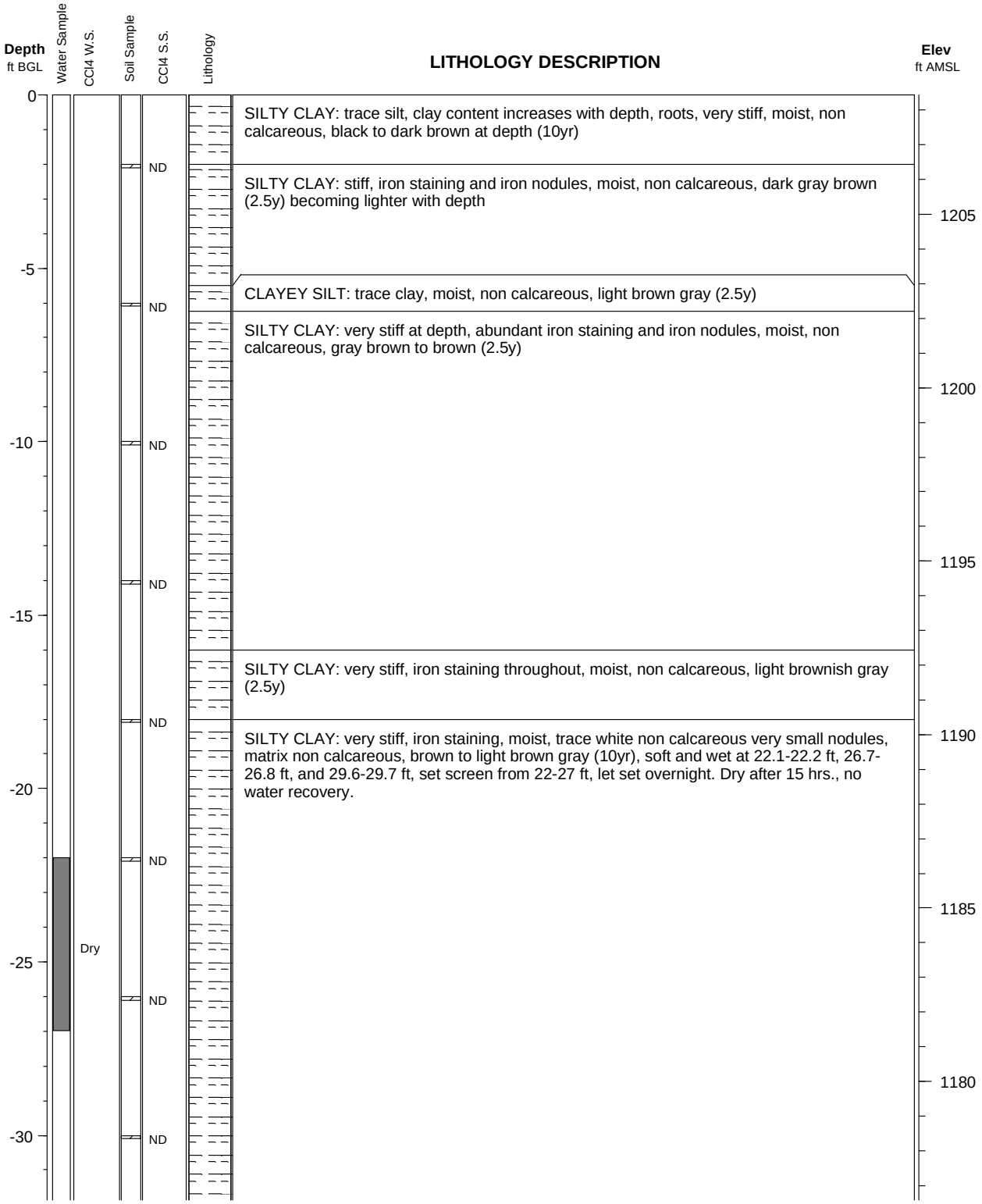
Project: Powhattan, KS

Elevation: 1208.446 ft.

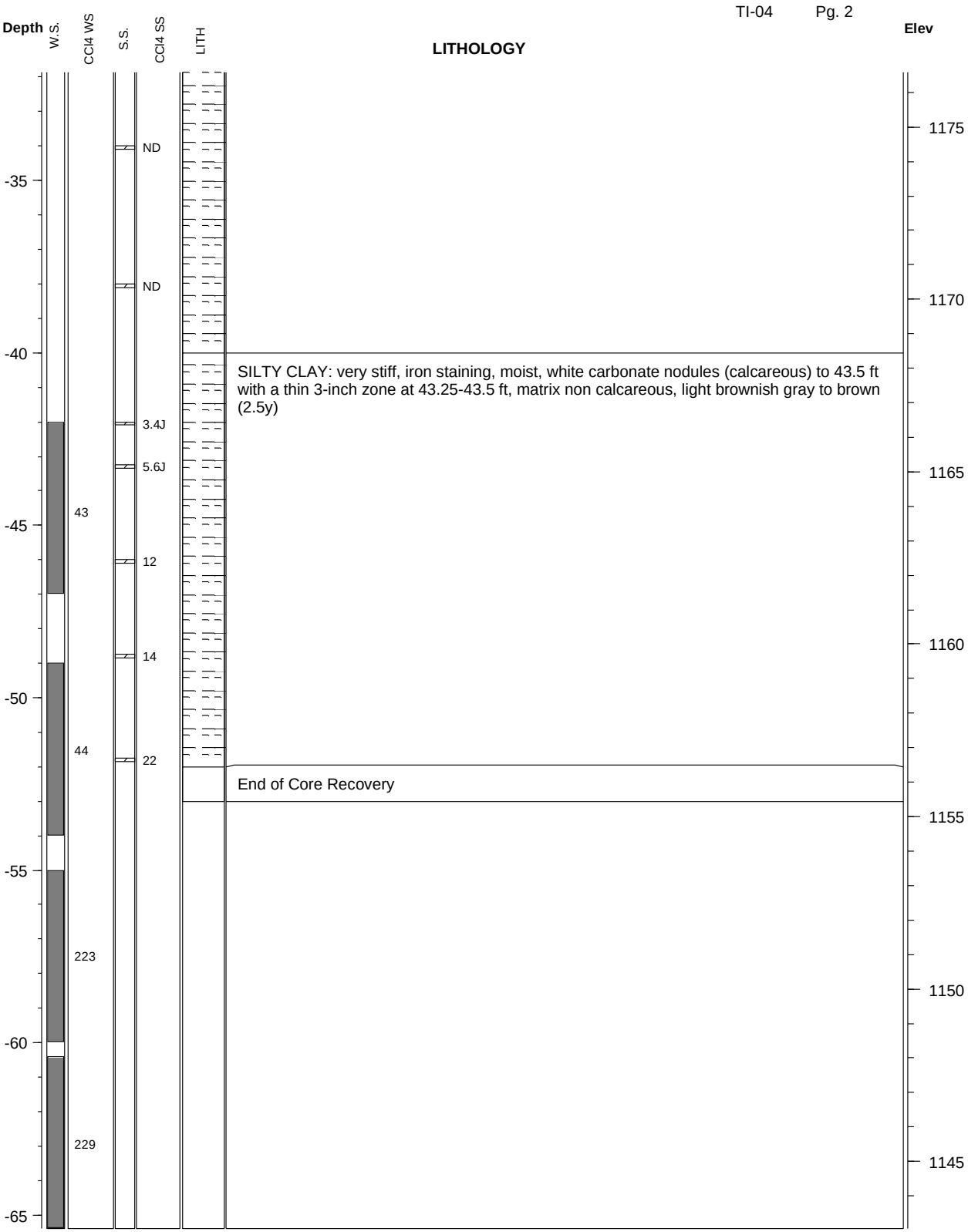
Geologist: Lisa Larsen

Depth: 65.4 ft BGL

Log Date: 7/12-13/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg



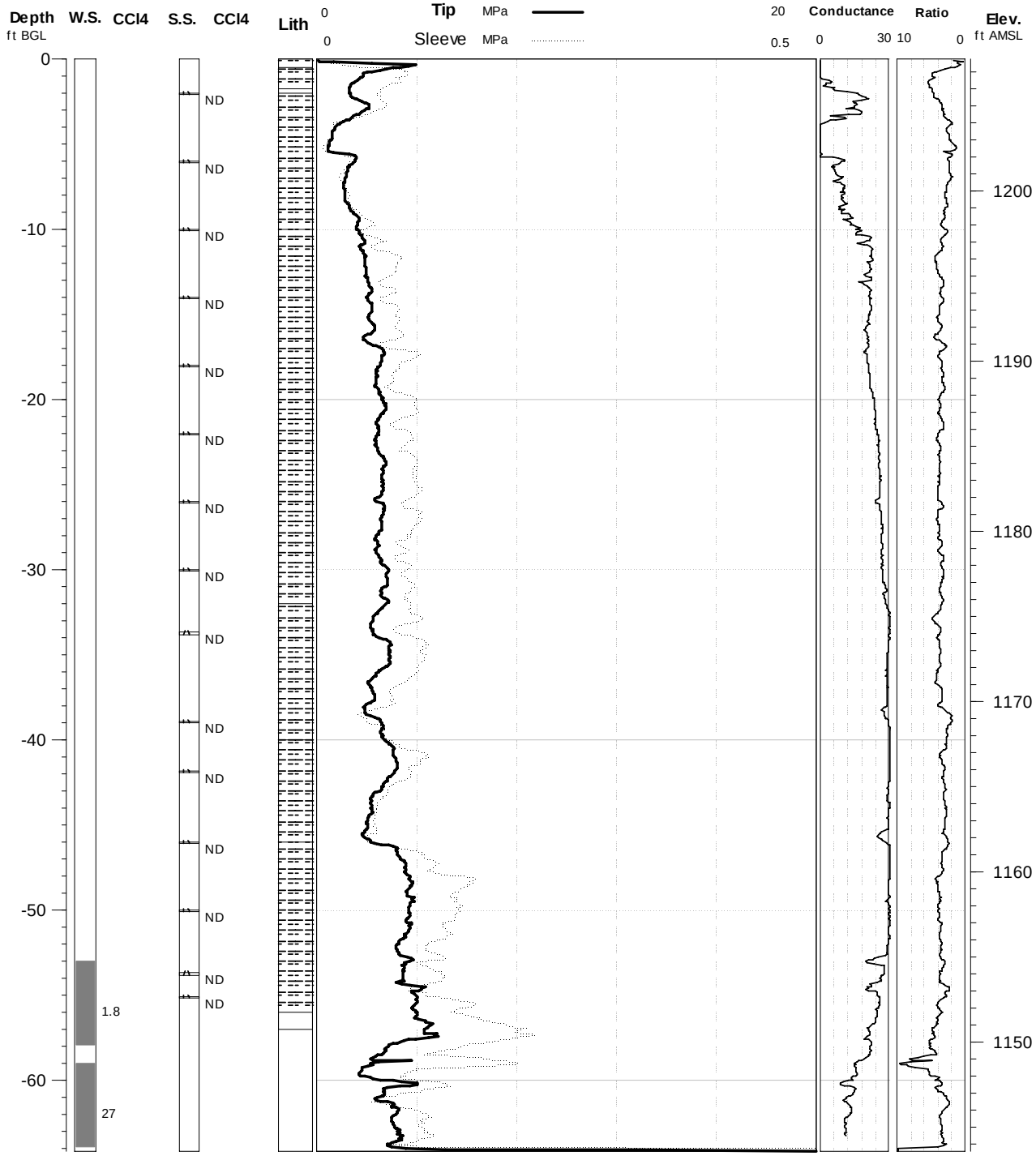
Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-05

Project: Powhattan, KS **Elevation:** 1207.751 ft.

Geologist: Lisa Larsen **Depth:** 64.173 ft BGL **Log Date:** 7/16-17/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-05

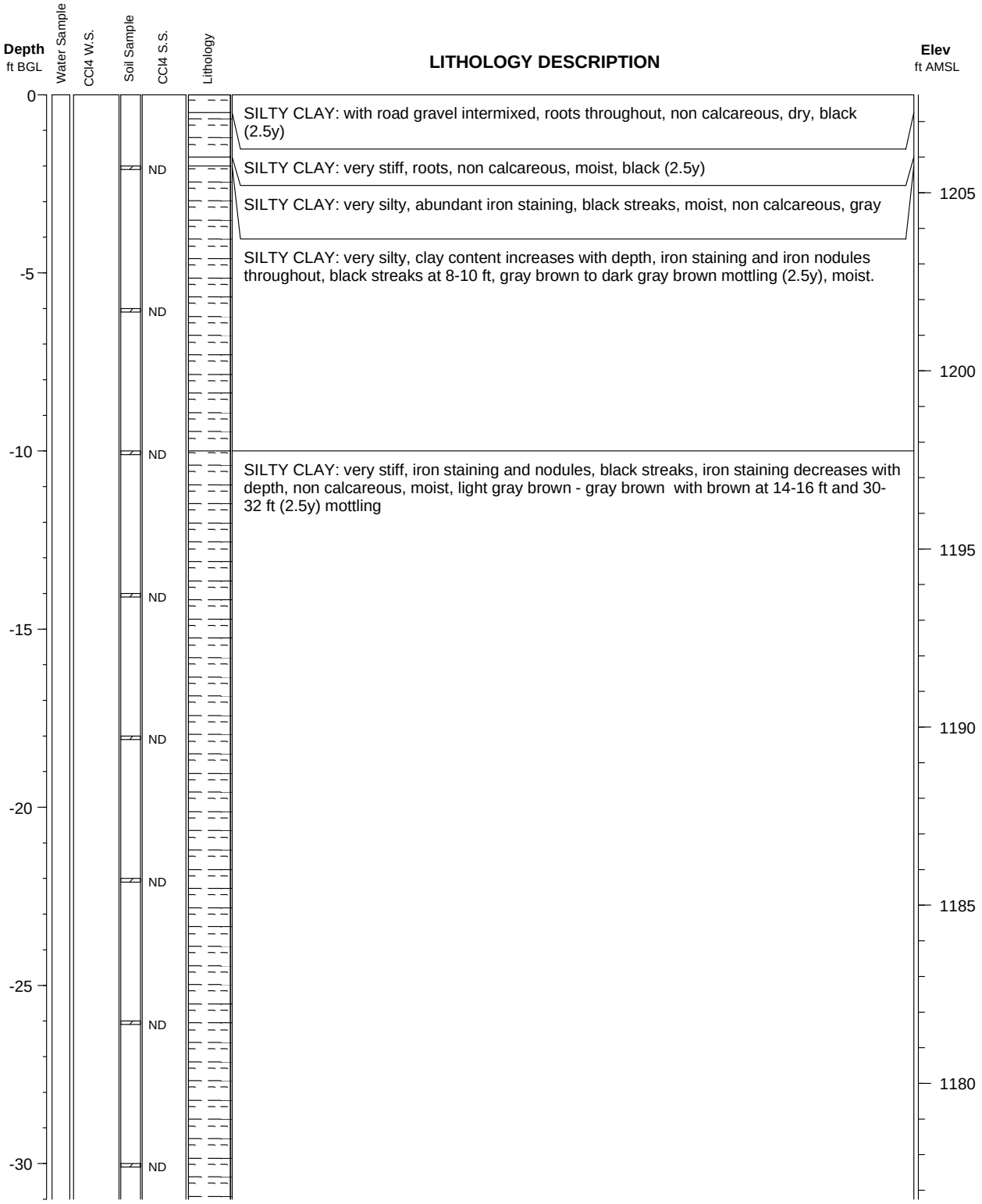
Project: Powhattan, KS

Elevation: 1207.751 ft.

Geologist: Lisa Larsen

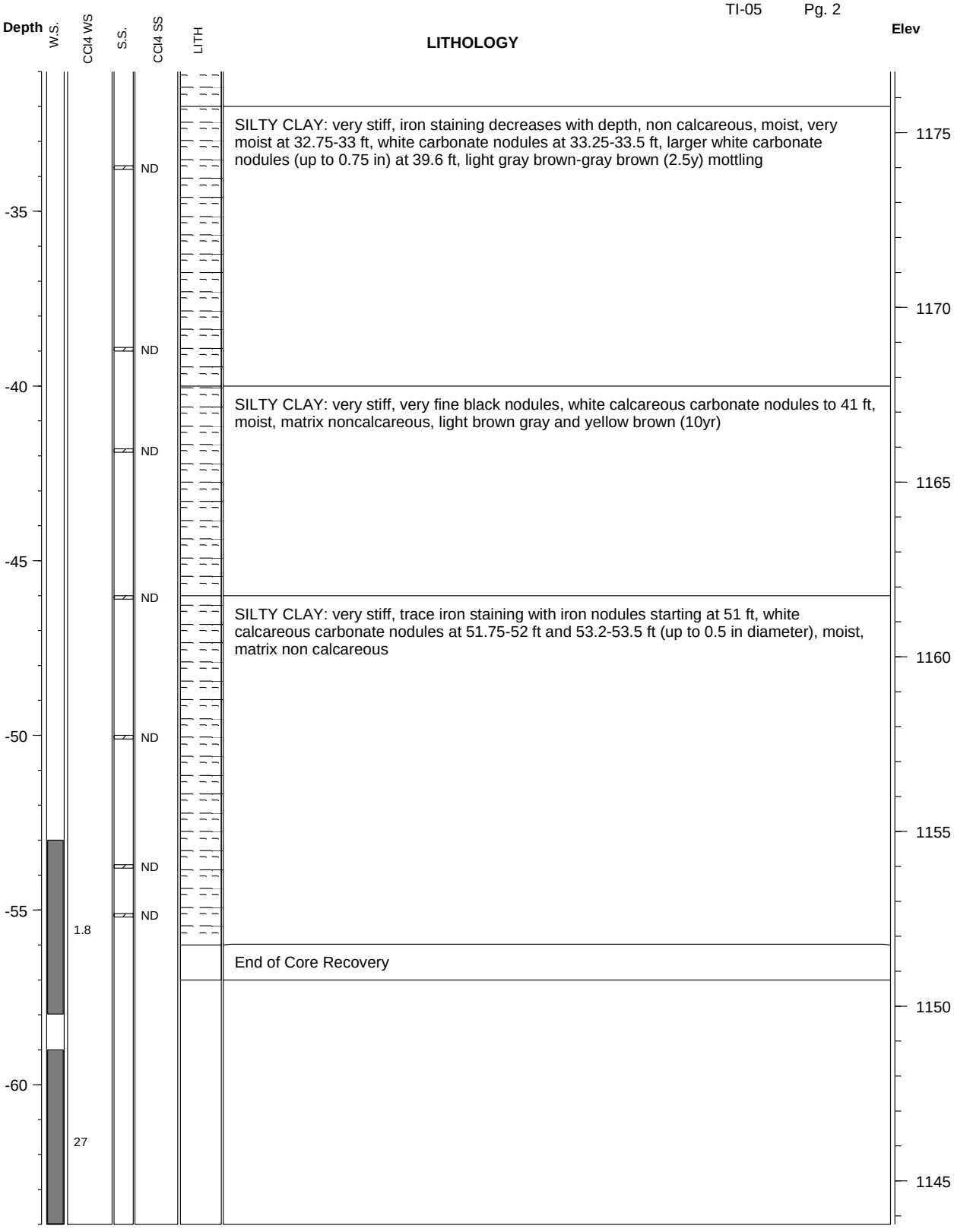
Depth: 64.173 ft BGL

Log Date: 7/16-17/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-05 Pg. 2



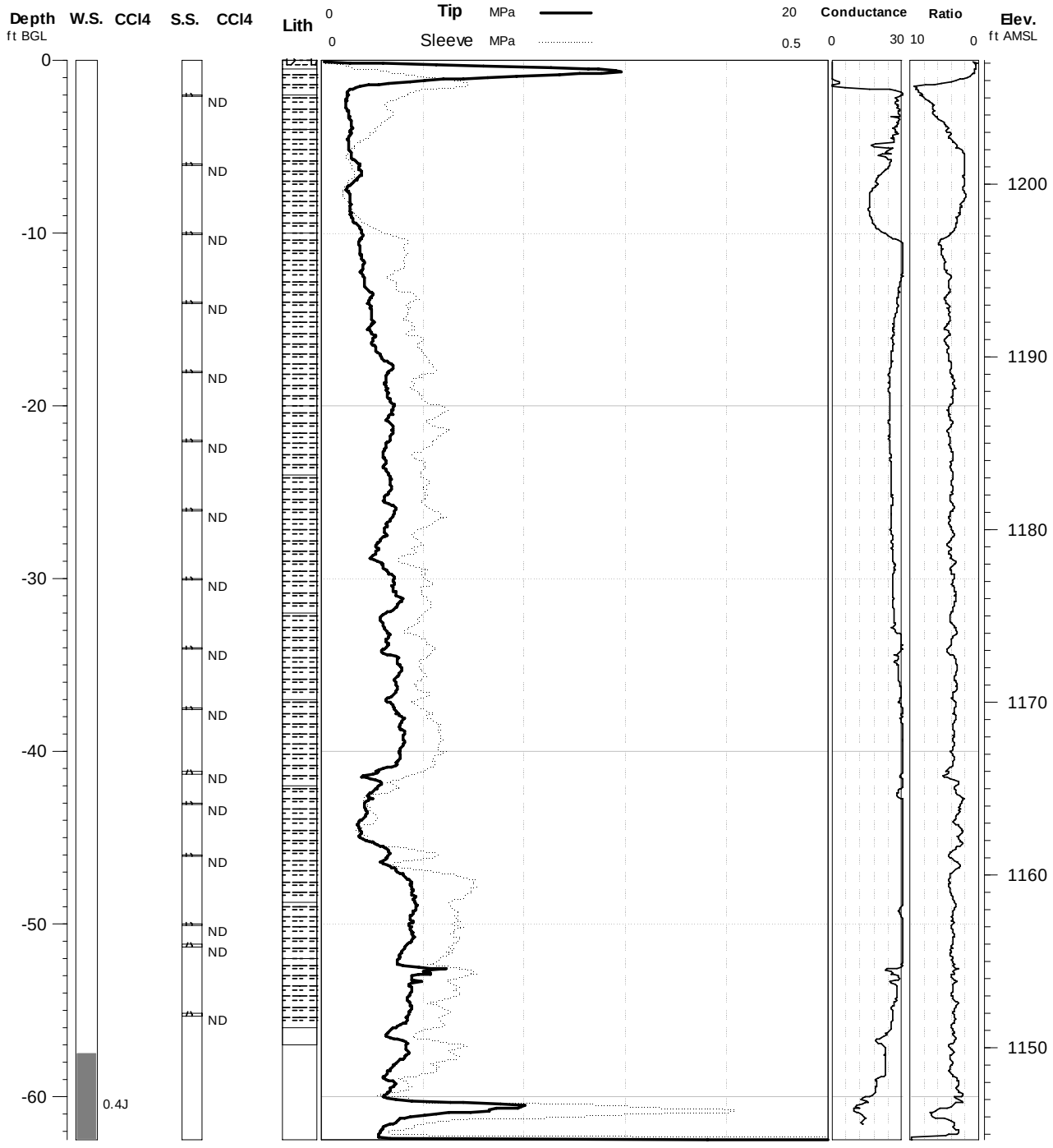
Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-06

Project: Powhattan, KS **Elevation:** 1207.192 ft.

Geologist: Lisa Larsen **Depth:** 62.532 ft BGL **Log Date:** 7/15/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-06

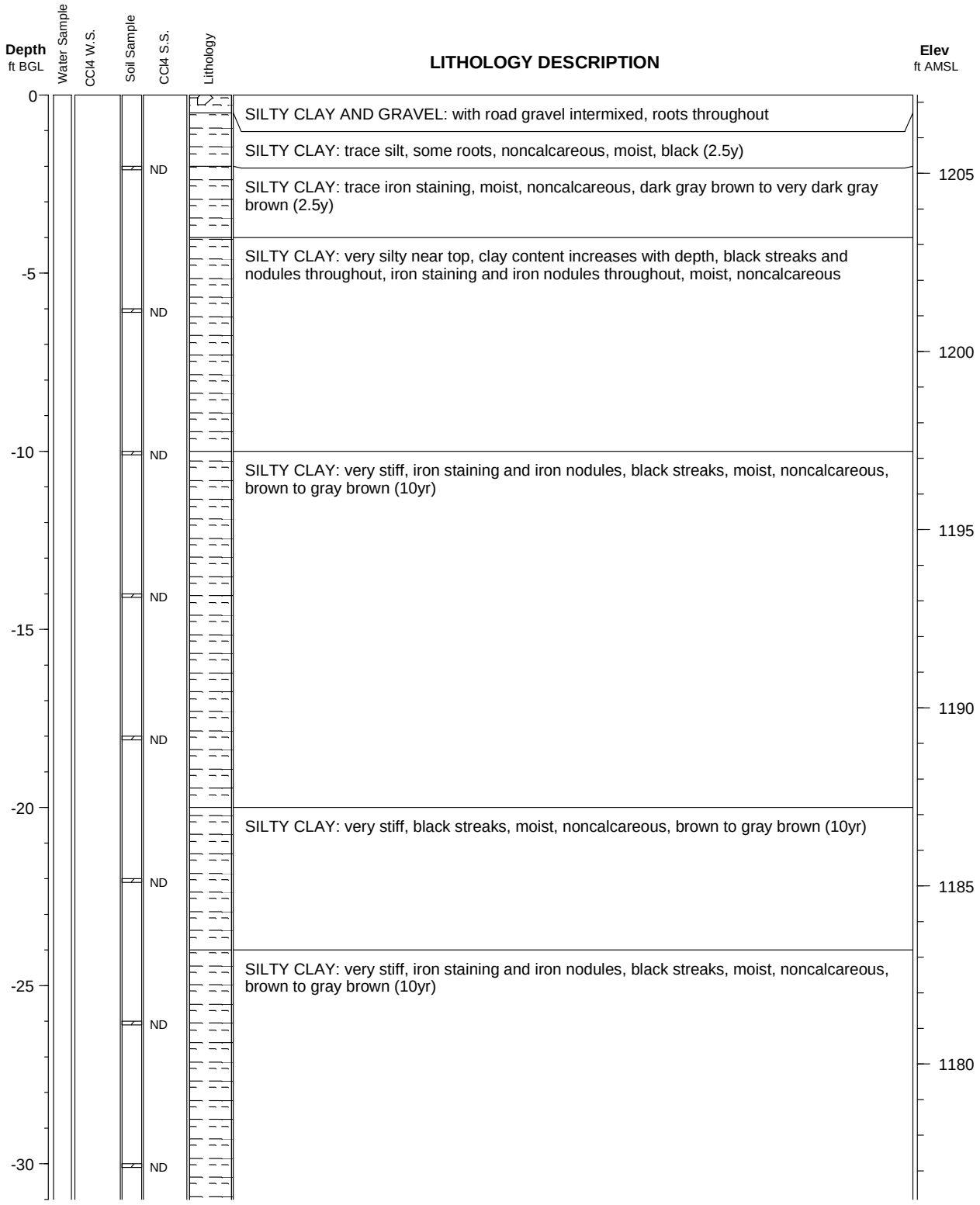
Project: Powhattan, KS

Elevation: 1207.192 ft.

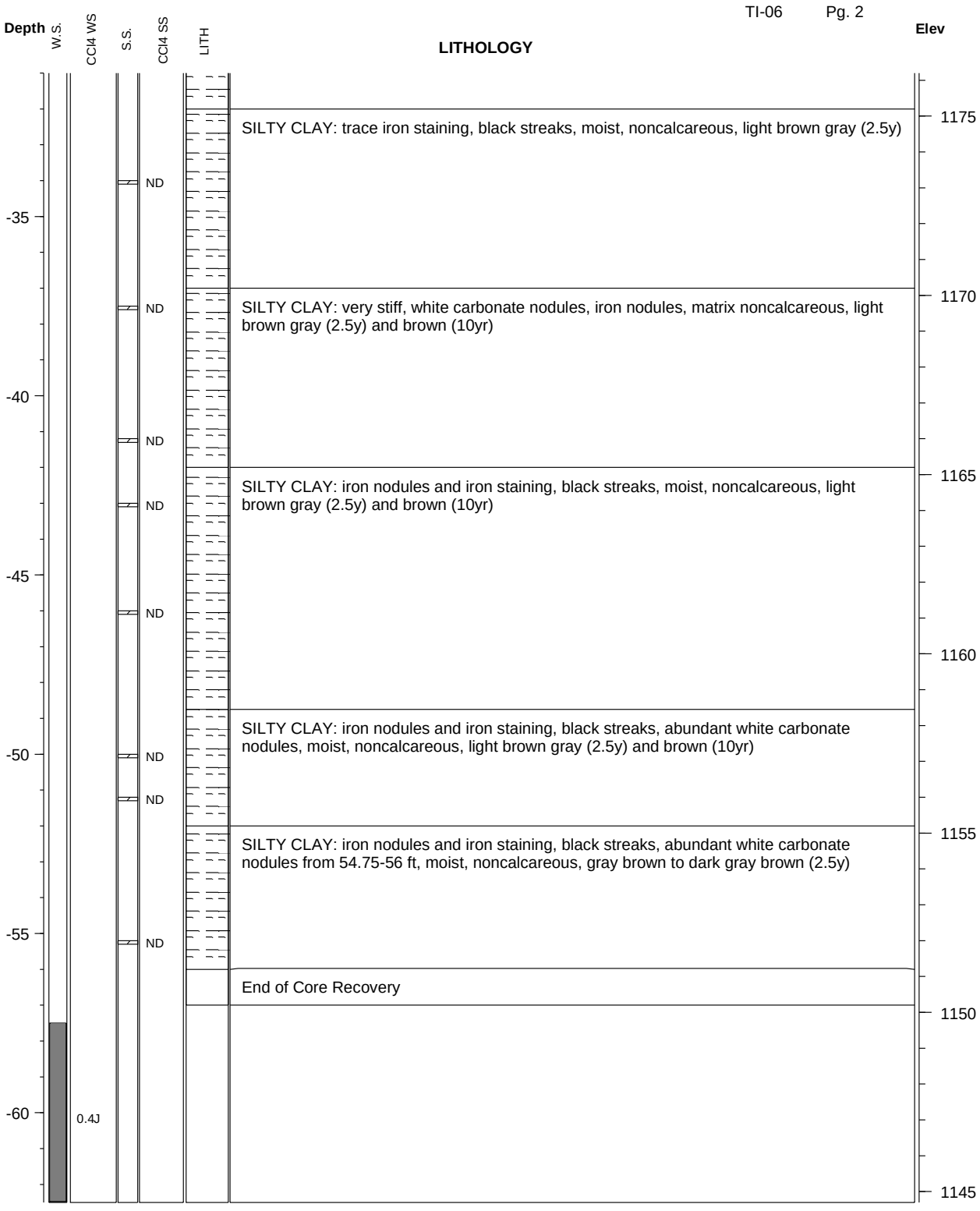
Geologist: Lisa Larsen

Depth: 62.532 ft BGL

Log Date: 7/15/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg



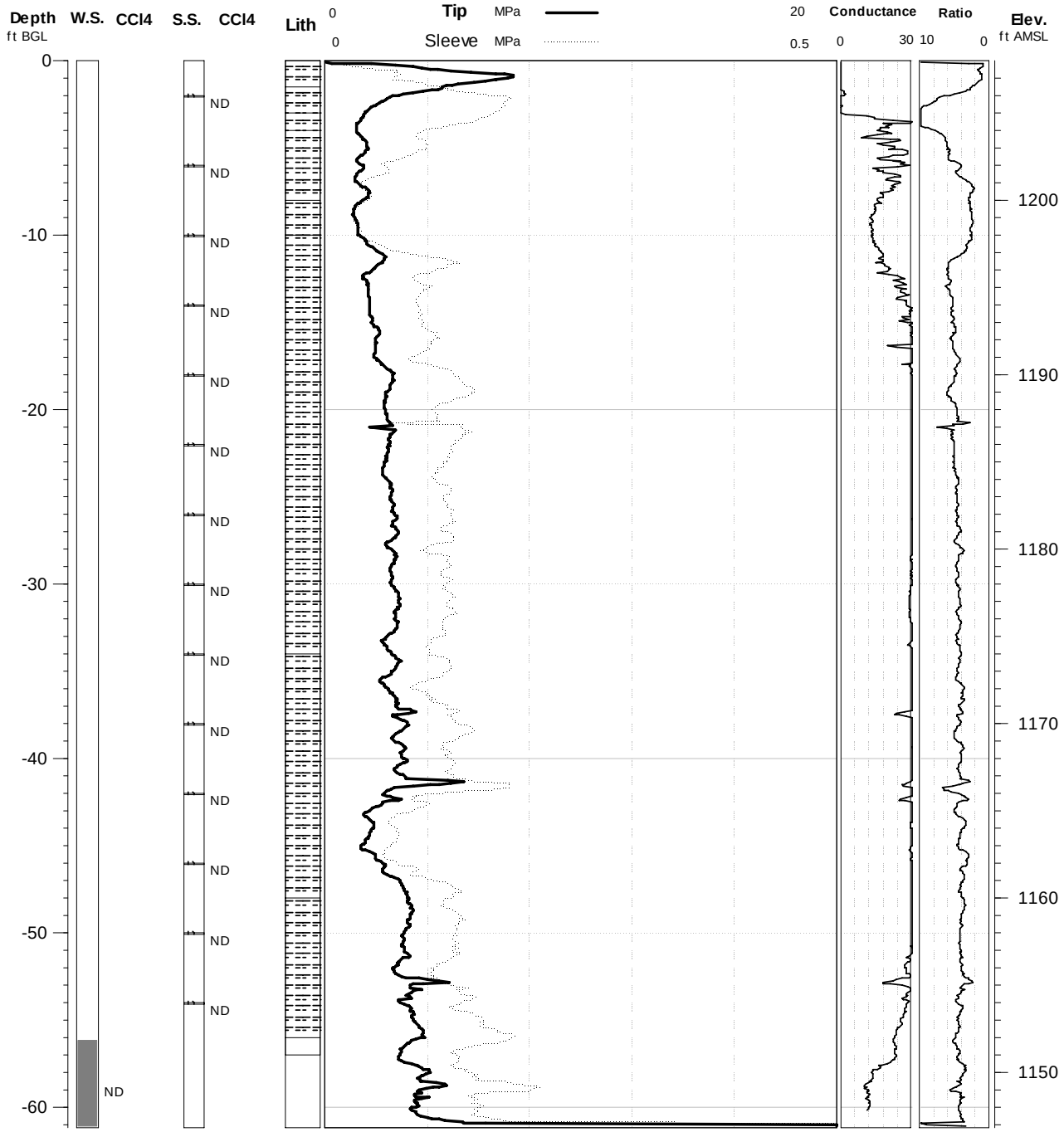
Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-07

Project: Powhattan, KS **Elevation:** 1207.998 ft.

Geologist: Lisa Larsen **Depth:** 61.14 ft **Log Date:** 7/31/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-07

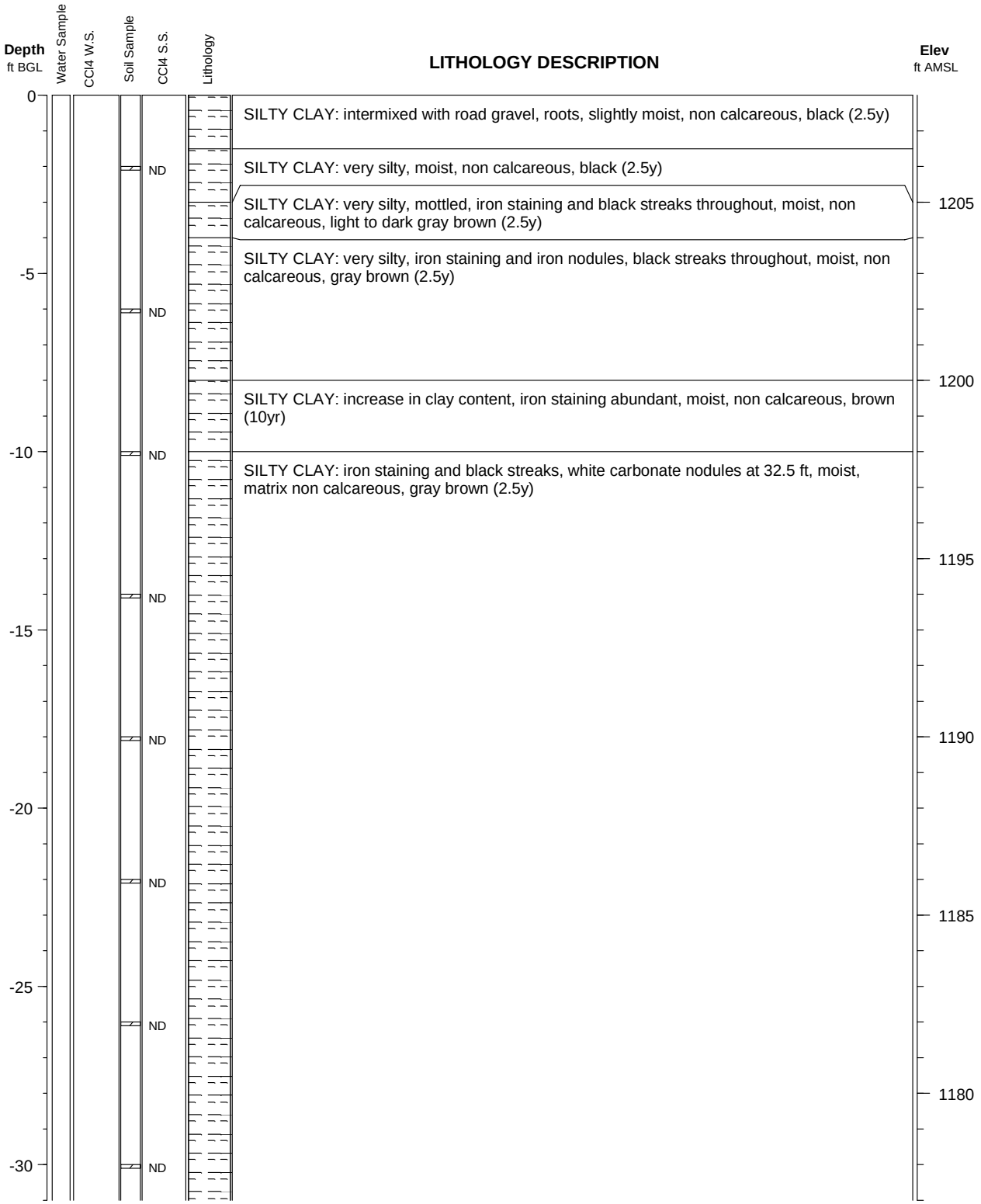
Project: Powhattan, KS

Elevation: 1207.998 ft.

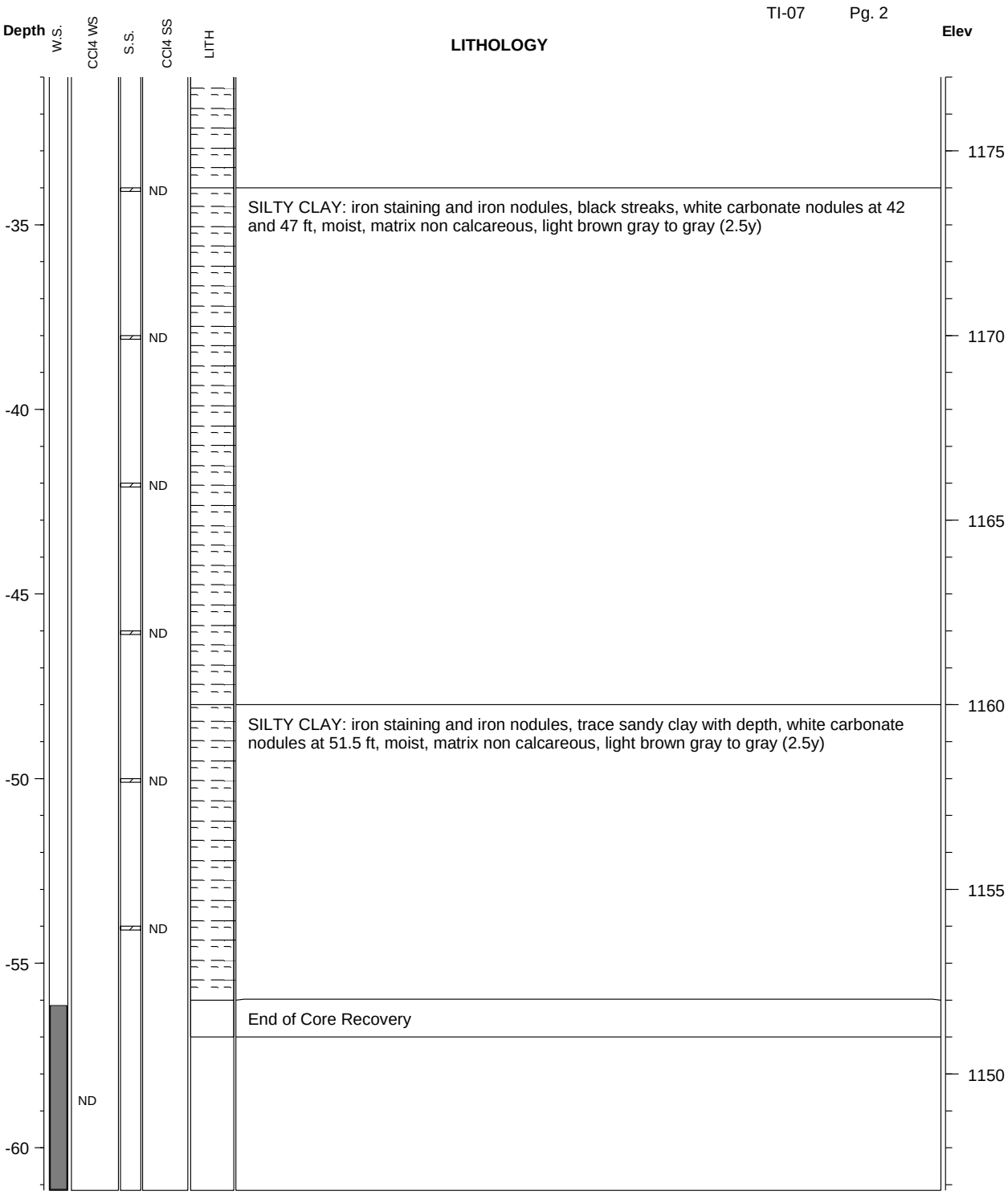
Geologist: Lisa Larsen

Depth: 61.14 ft

Log Date: 7/31/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

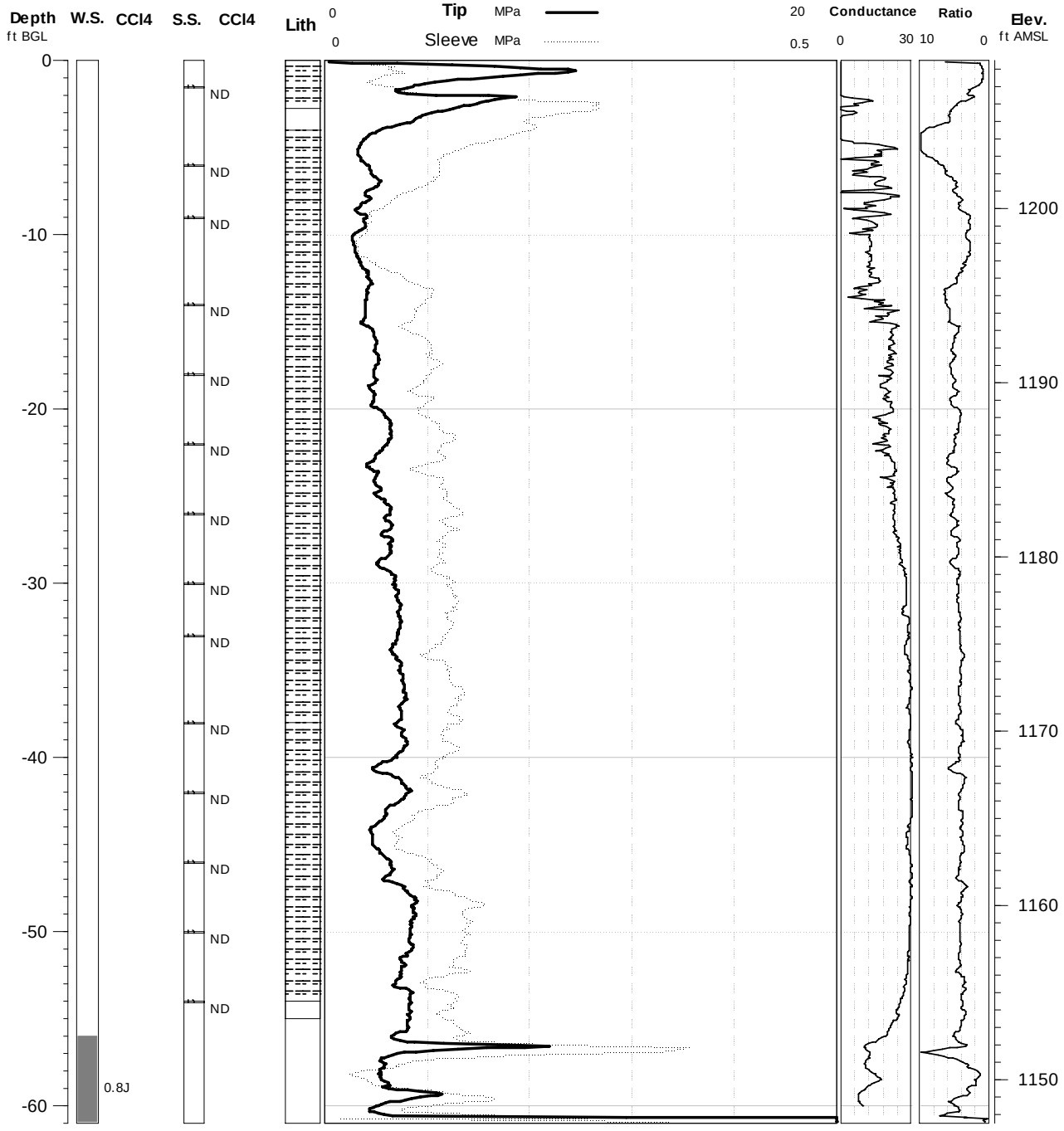


Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-08

Project: Powhattan, KS
Elevation: 1208.477 ft.
Geologist: Lisa Larsen
Depth: 61 ft. BGL
Log Date: 7/28-29/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-08

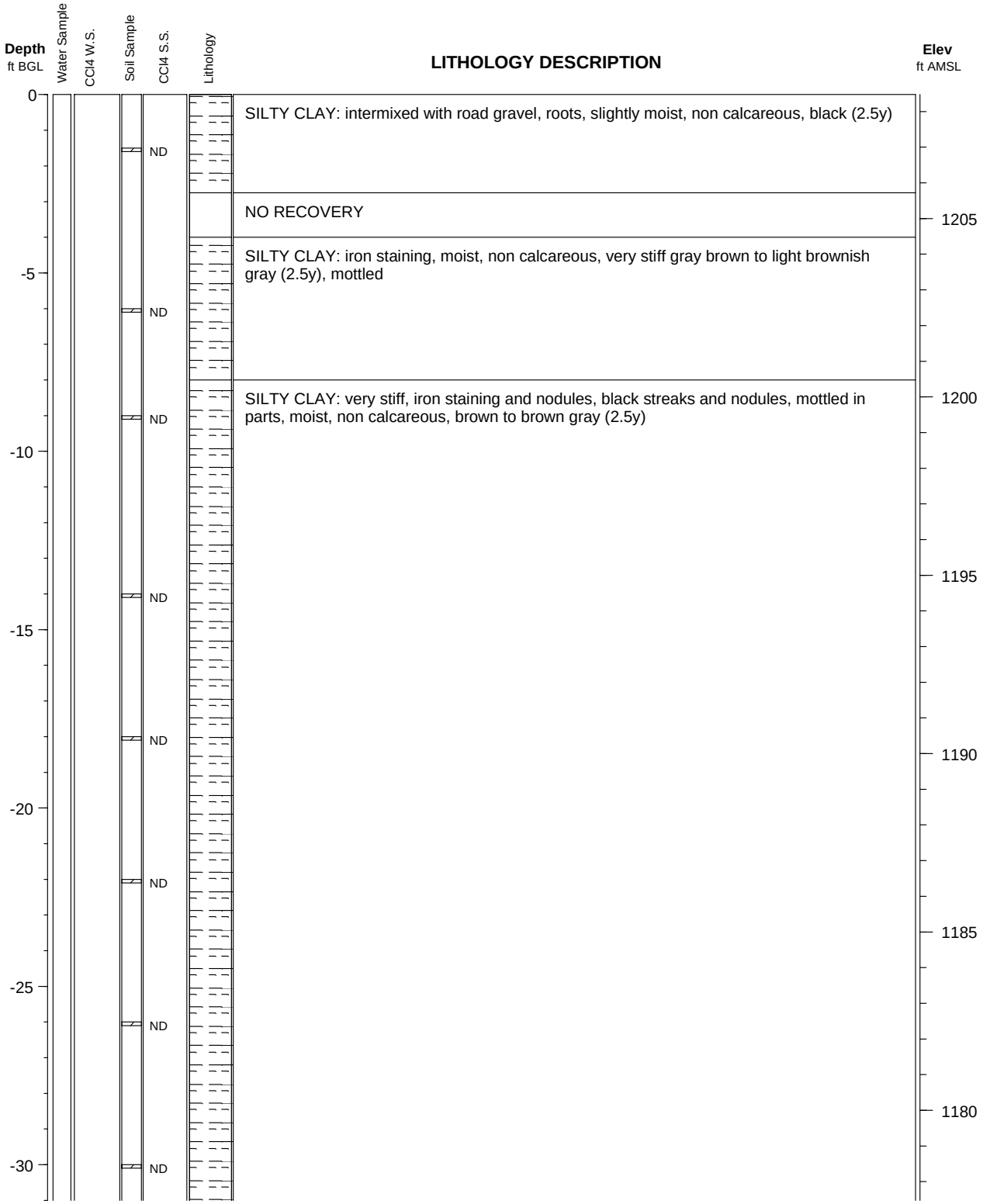
Project: Powhattan, KS

Elevation: 1208.477 ft.

Geologist: Lisa Larsen

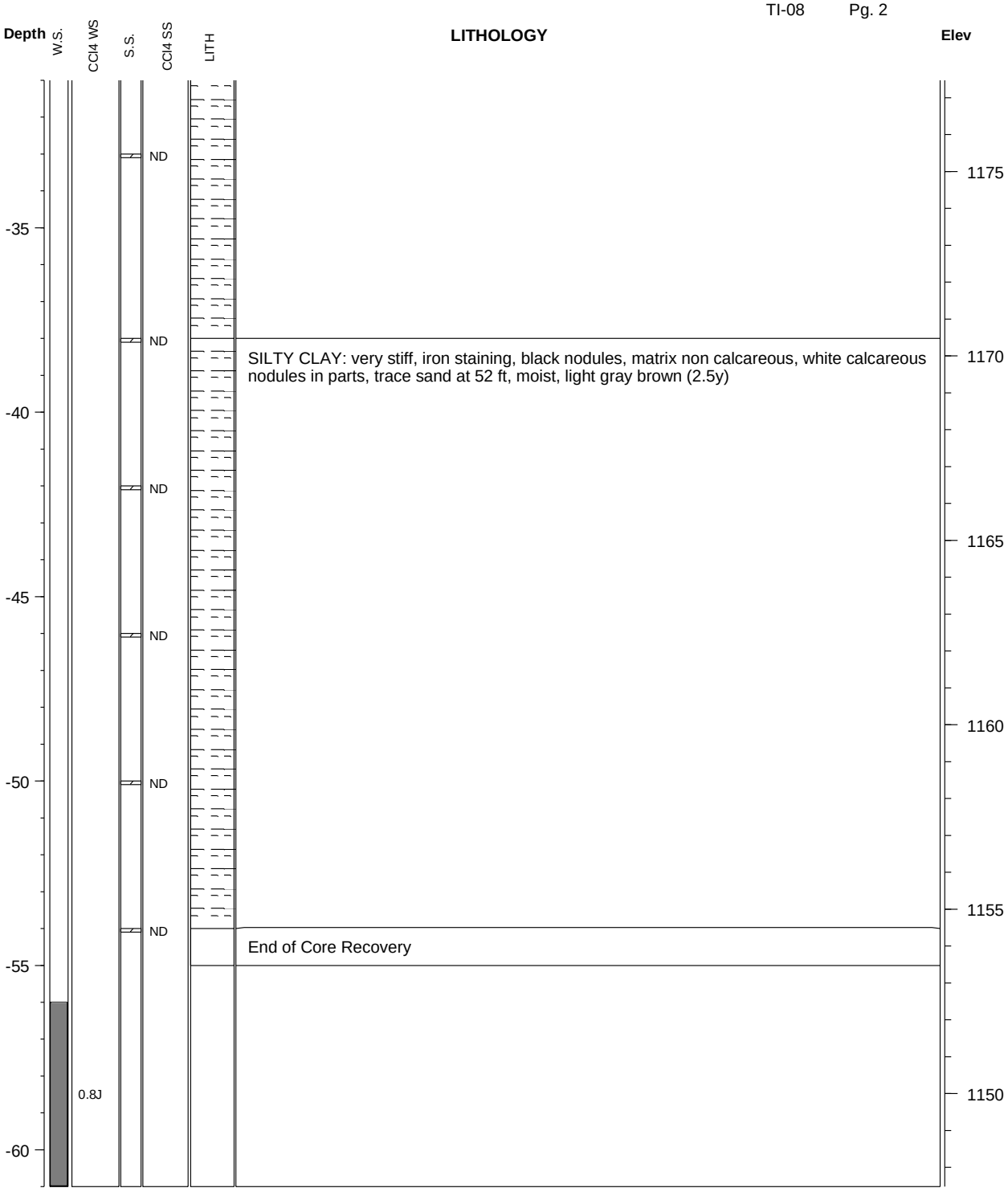
Depth: 61 ft. BGL

Log Date: 7/28-29/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-08 Pg. 2



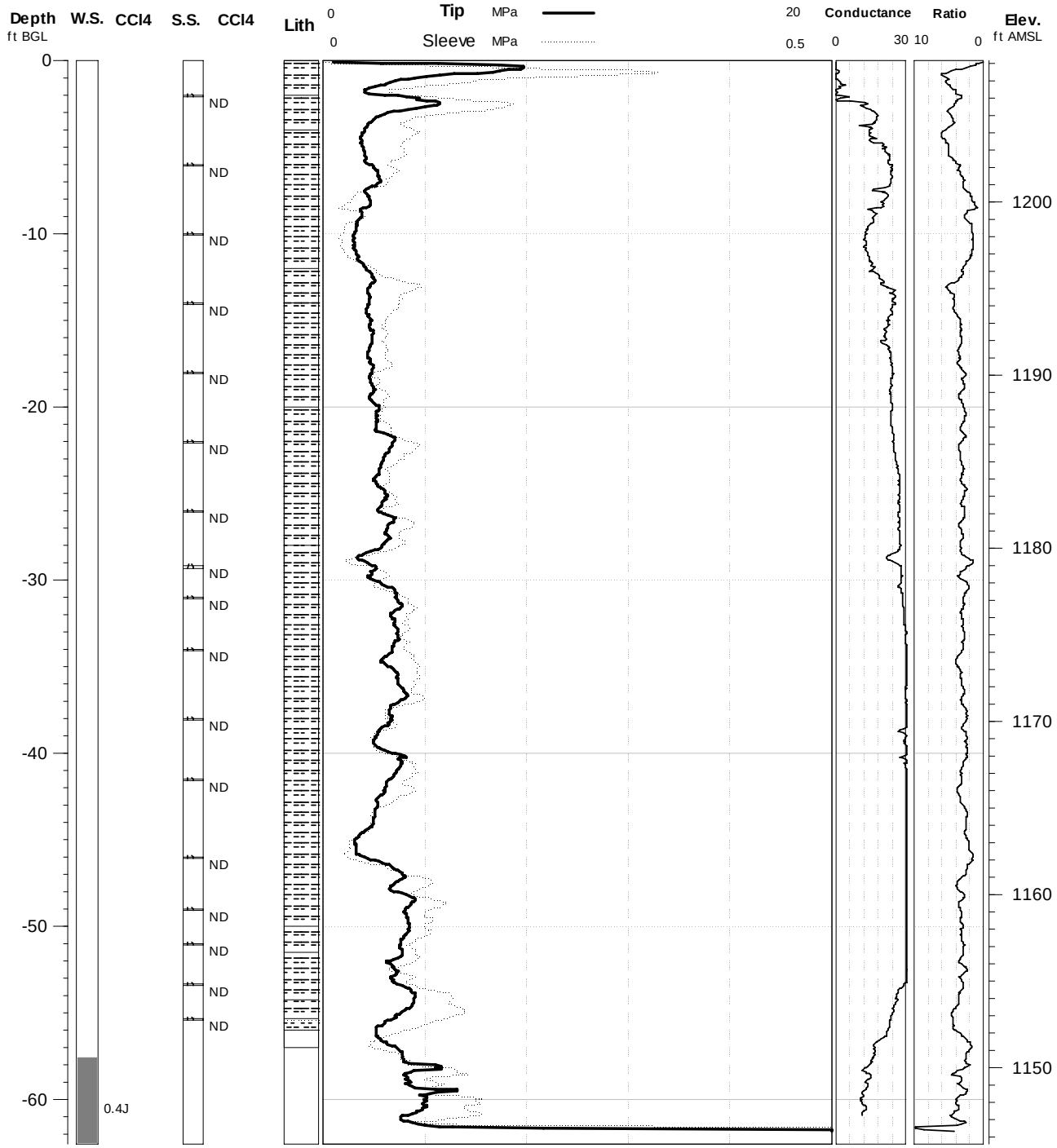
Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-09

Project: Powhattan, KS **Elevation:** 1208.197 ft.

Geologist: Lisa Larsen **Depth:** 62.6 ft BGL **Log Date:** 7/15/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-09

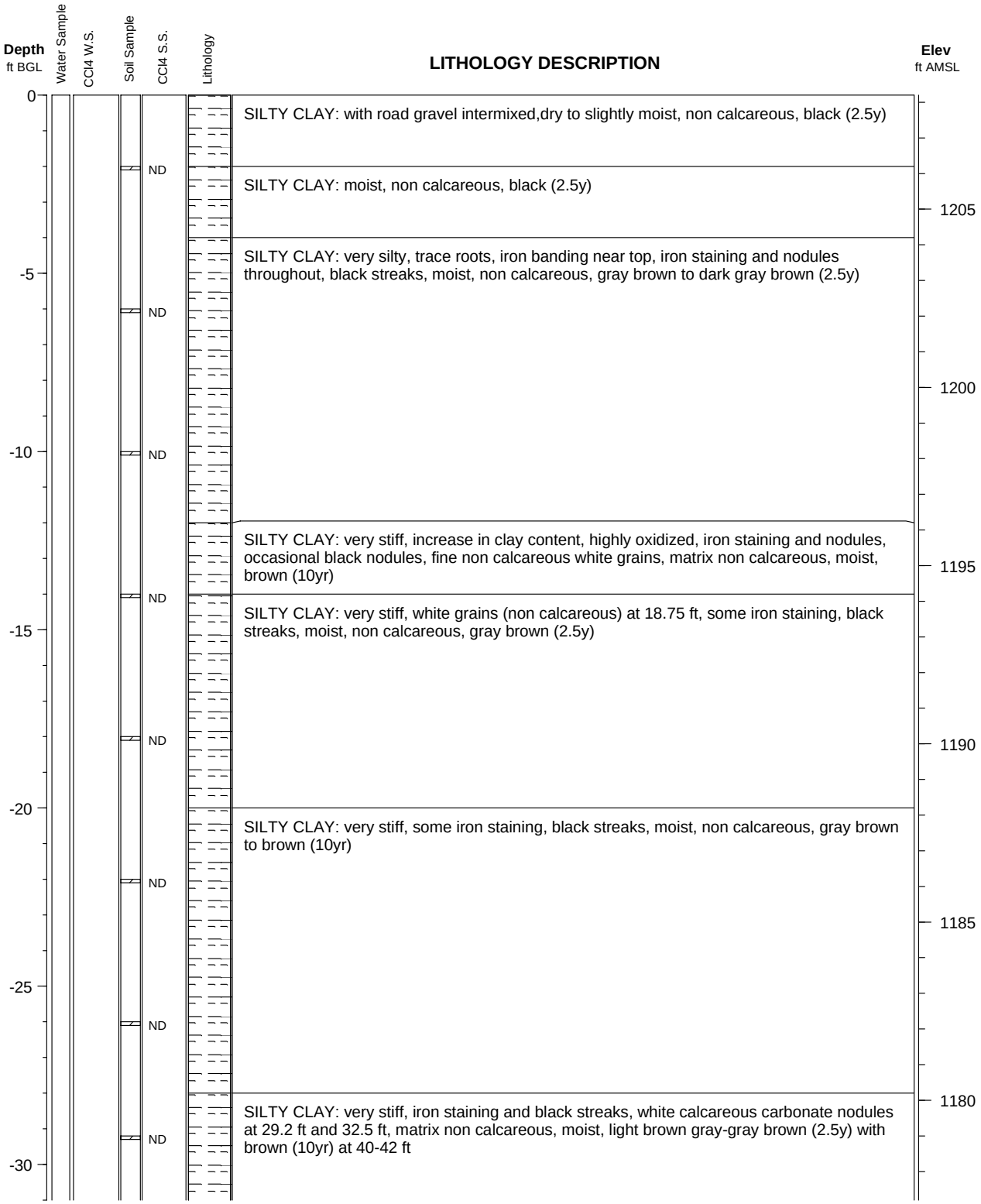
Project: Powhattan, KS

Elevation: 1208.197 ft.

Geologist: Lisa Larsen

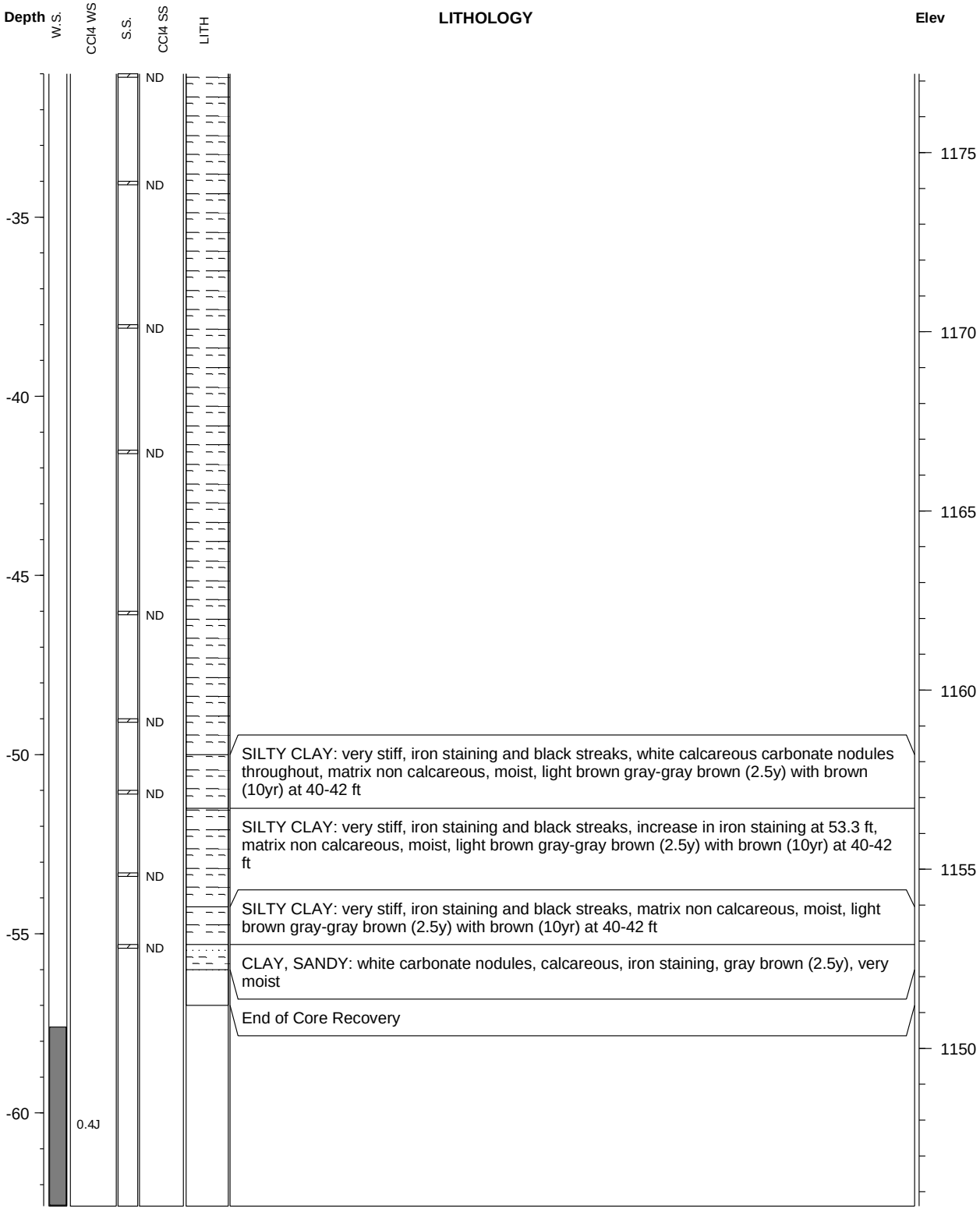
Depth: 62.6 ft BGL

Log Date: 7/15/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-09 Pg. 2



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-10

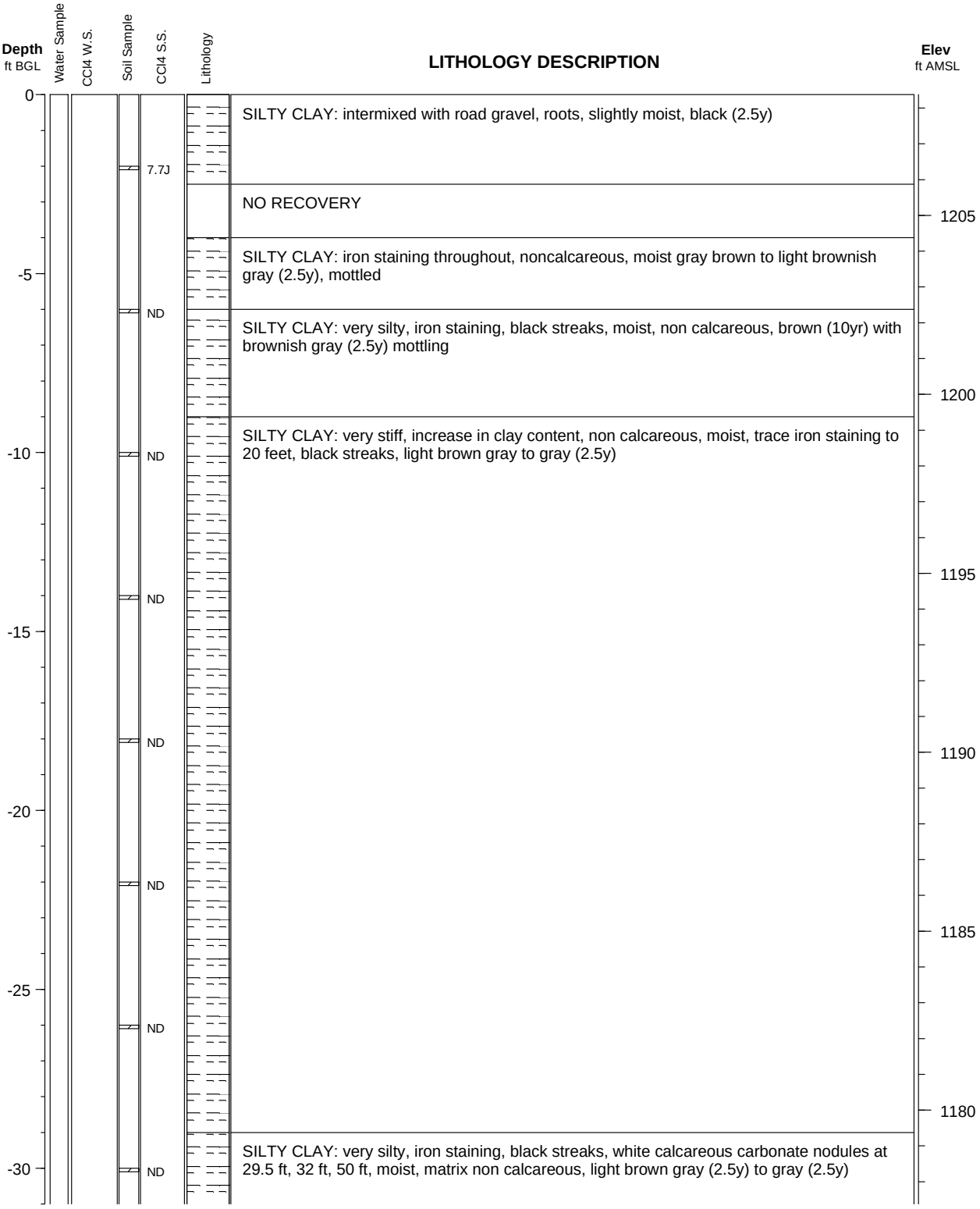
Project: Powhattan, KS

Elevation: 1208.366 ft.

Geologist: Lisa Larsen

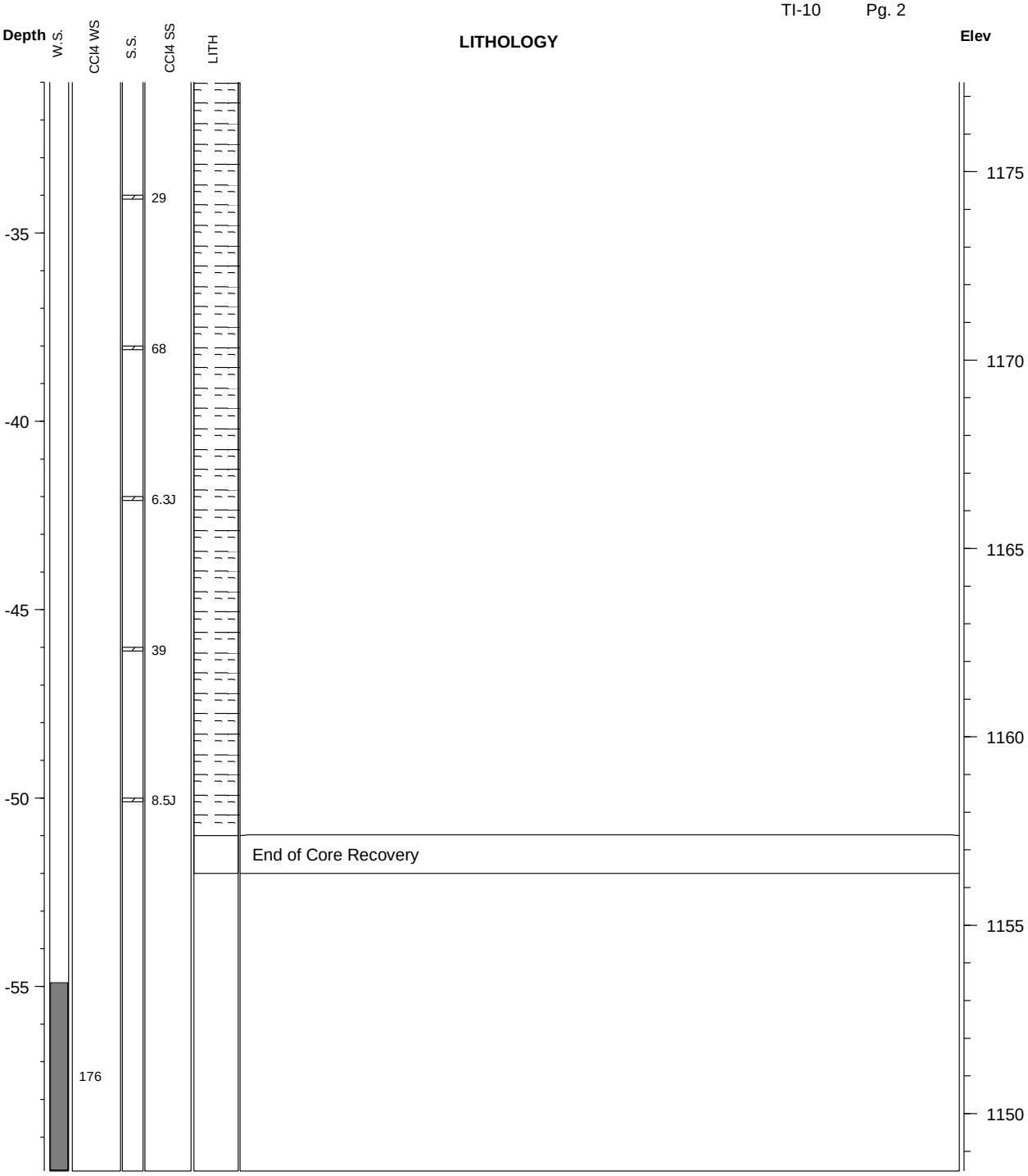
Depth: 59.9 ft. BGL

Log Date: 7/27/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-10 Pg. 2



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-11

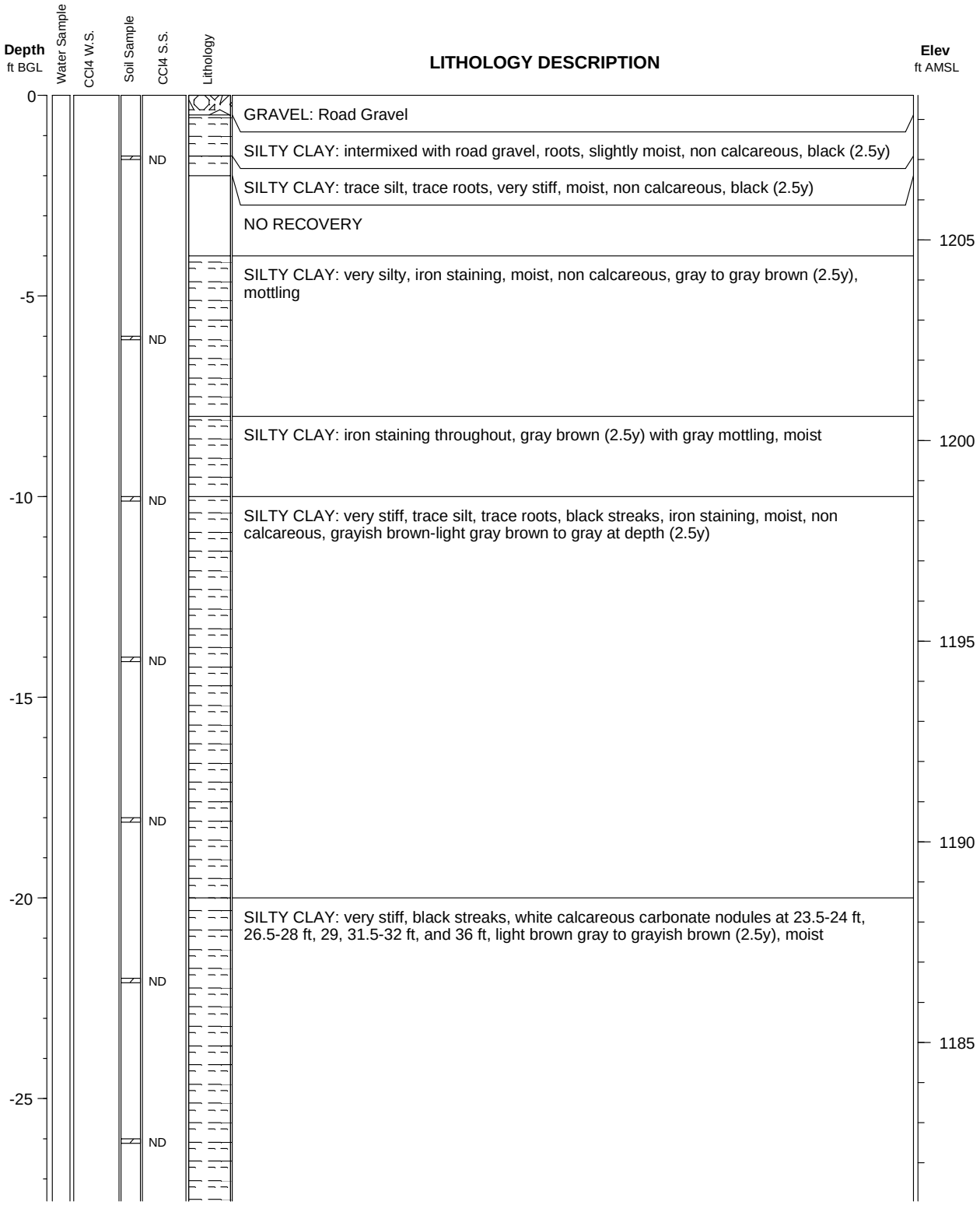
Project: Powhattan, KS

Elevation: 1208.592 ft.

Geologist: Lisa Larsen

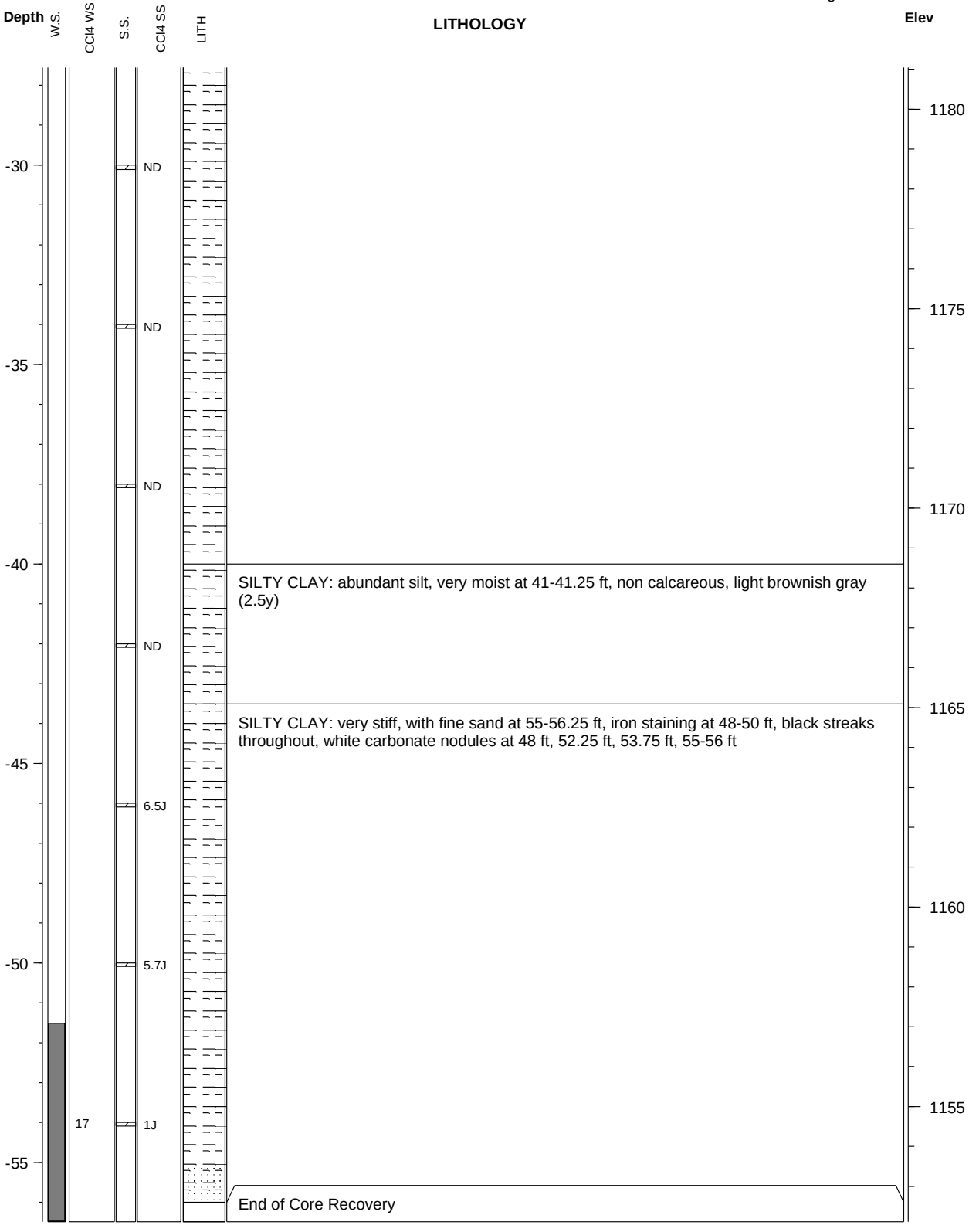
Depth: 56.5 ft BGL

Log Date: 7/26/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-11 Pg. 2



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-12

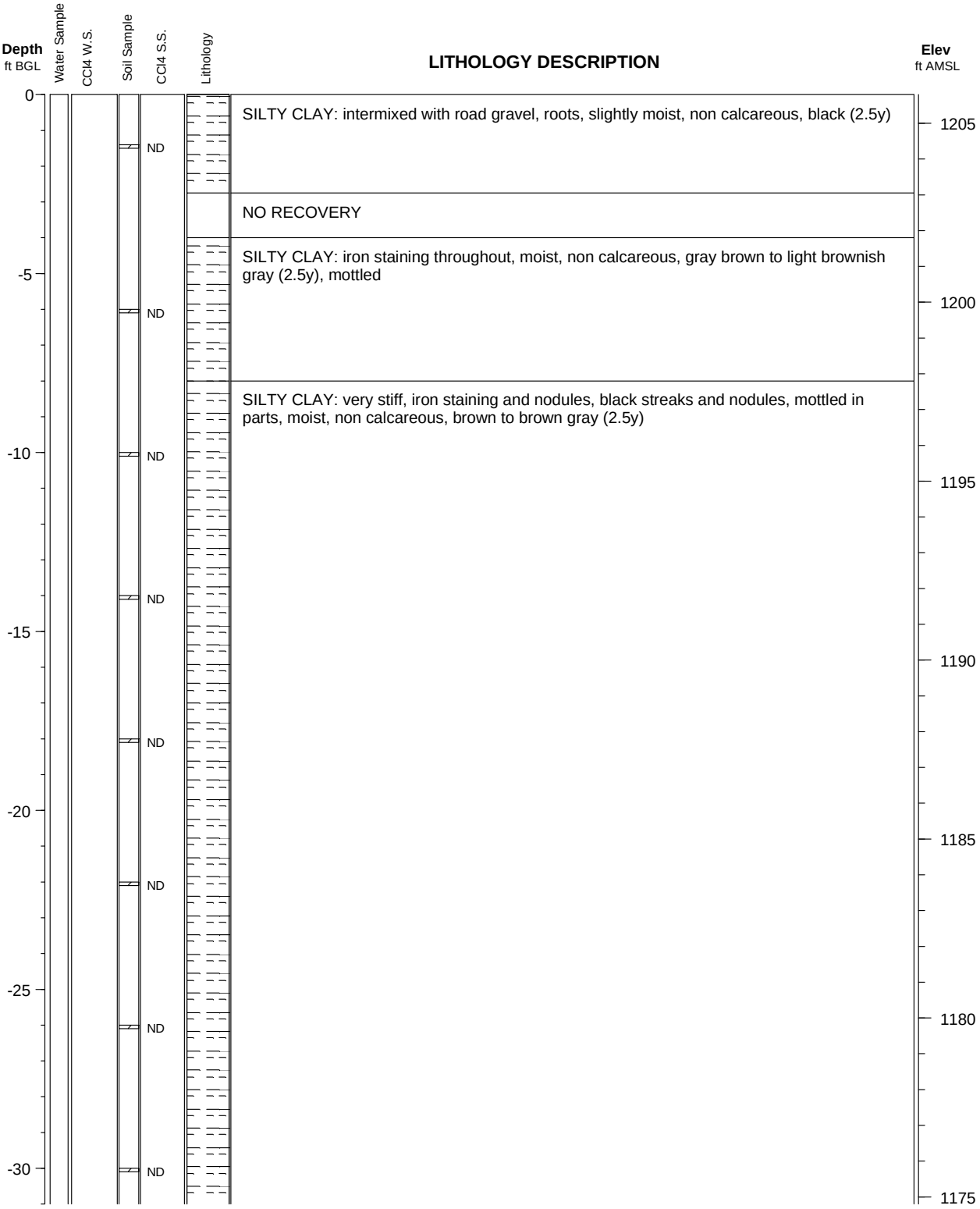
Project: Powhattan, KS

Elevation: 1205.794 ft.

Geologist: Lisa Larsen

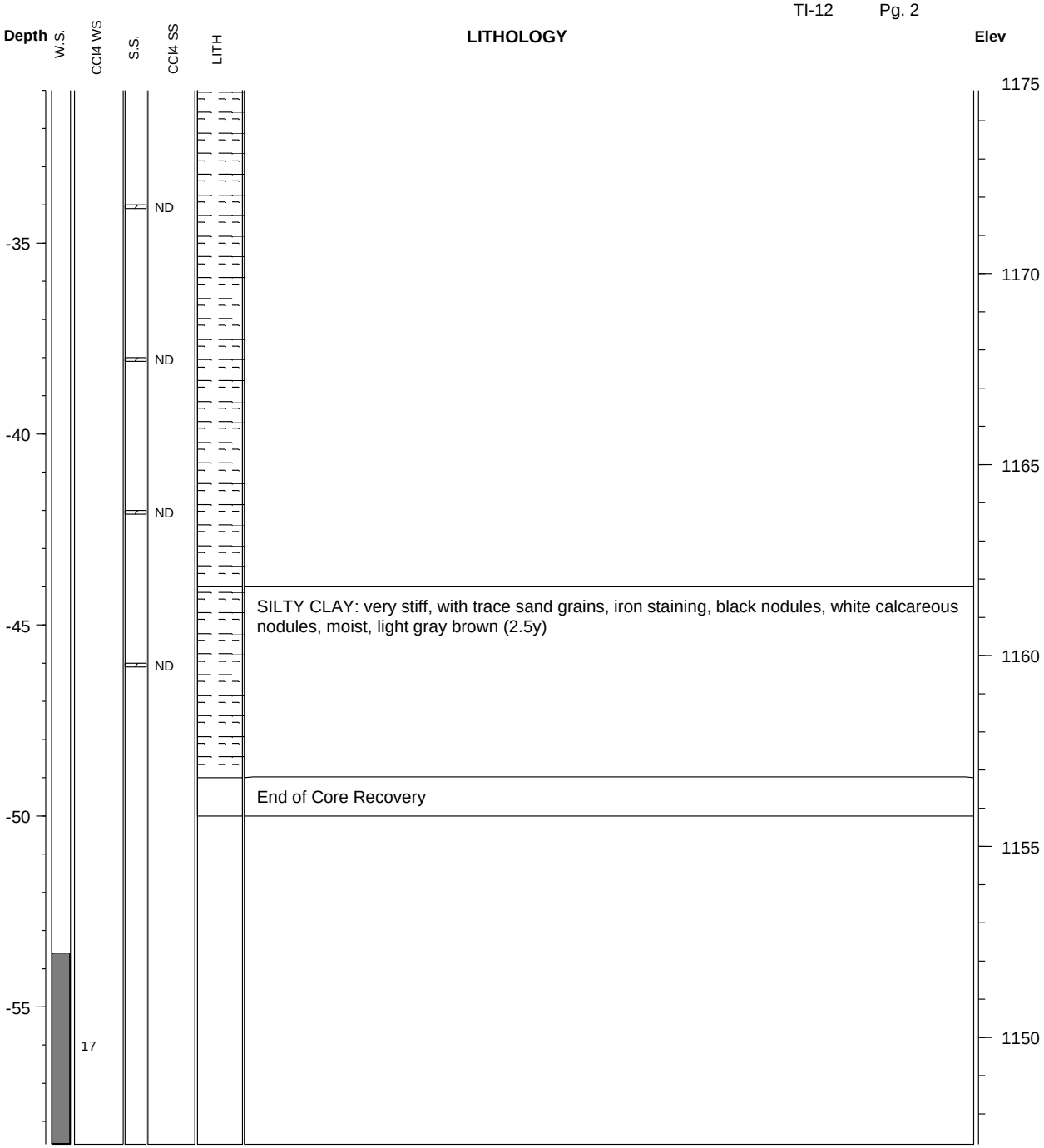
Depth: 58.6 ft. BGL

Log Date: 7/27-28/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-12 Pg. 2



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

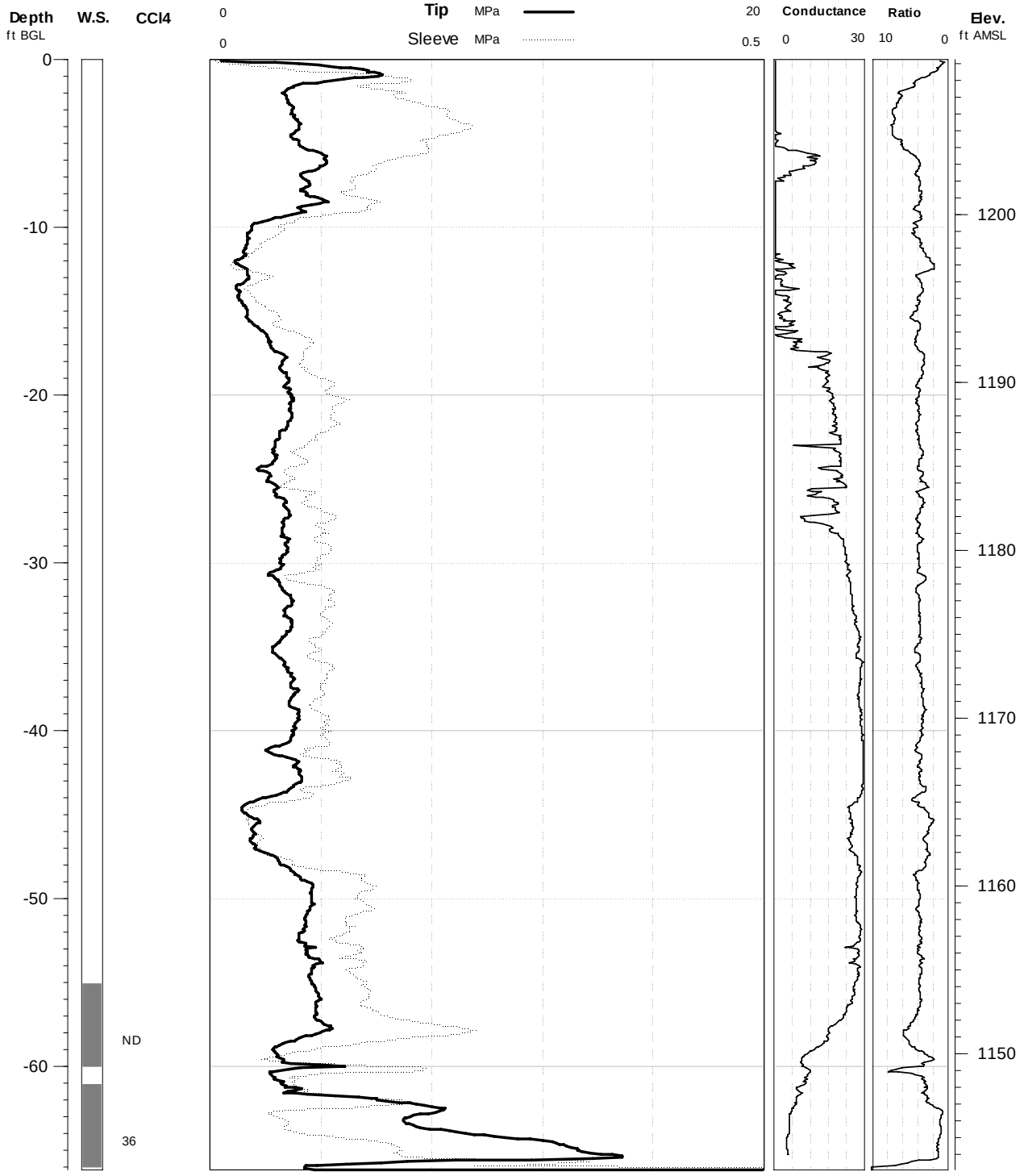
Argonne National Laboratory

Project: Powhattan, KS
Geologist: Lisa Larsen

Elevation: 1209.289 ft.
Depth: 66.207 ft. BGL

Boring ID: TI-13

Log Date: 7/17/07



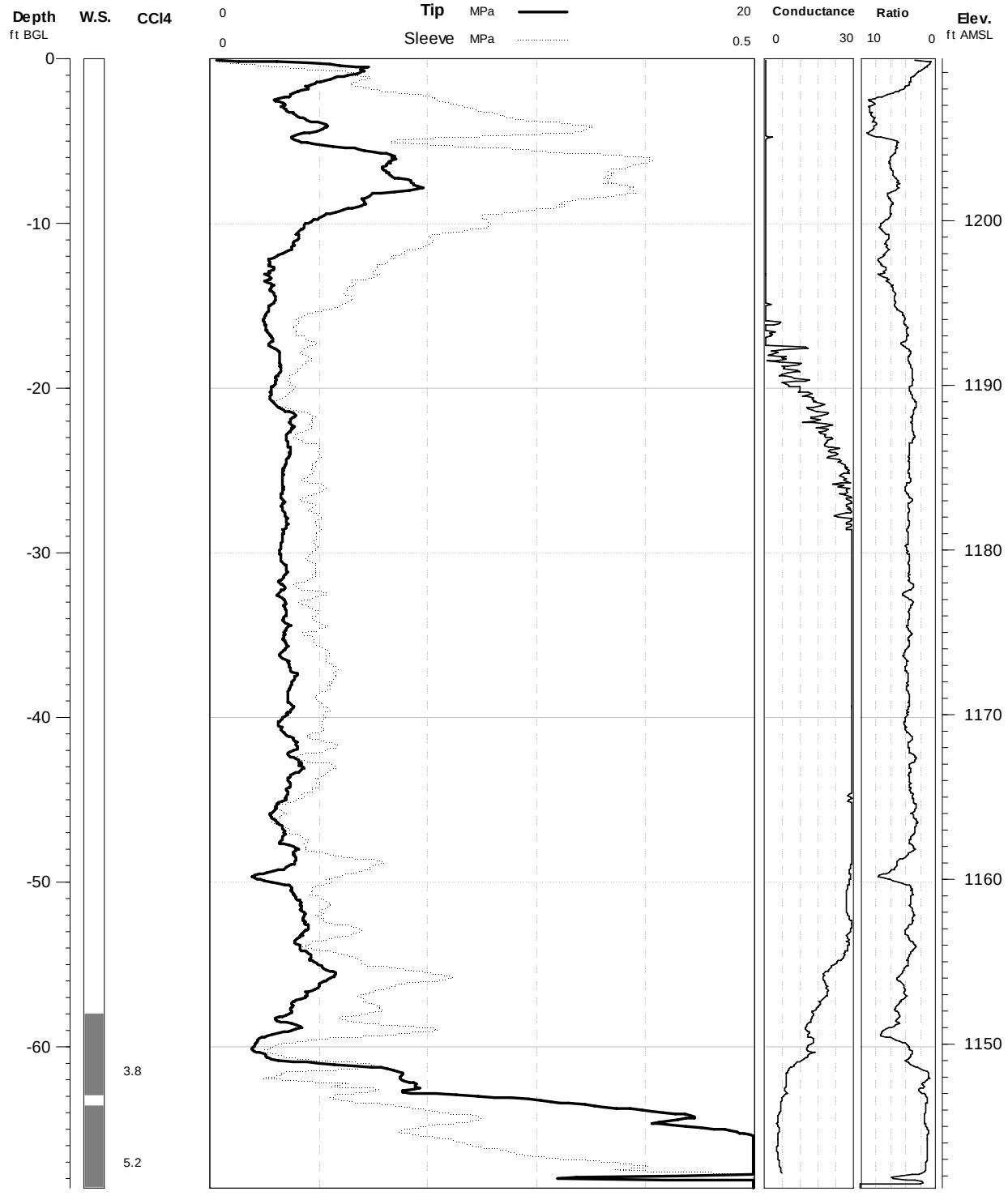
Carbon tetrachloride in water sample = micrograms/L

Argonne National Laboratory

Boring ID: TI-14

Project: Powhattan, KS **Elevation:** 1209.866 ft.

Geologist: Lisa Larsen **Depth:** 68.569 ft. BGL **Log Date:** 7/17/07



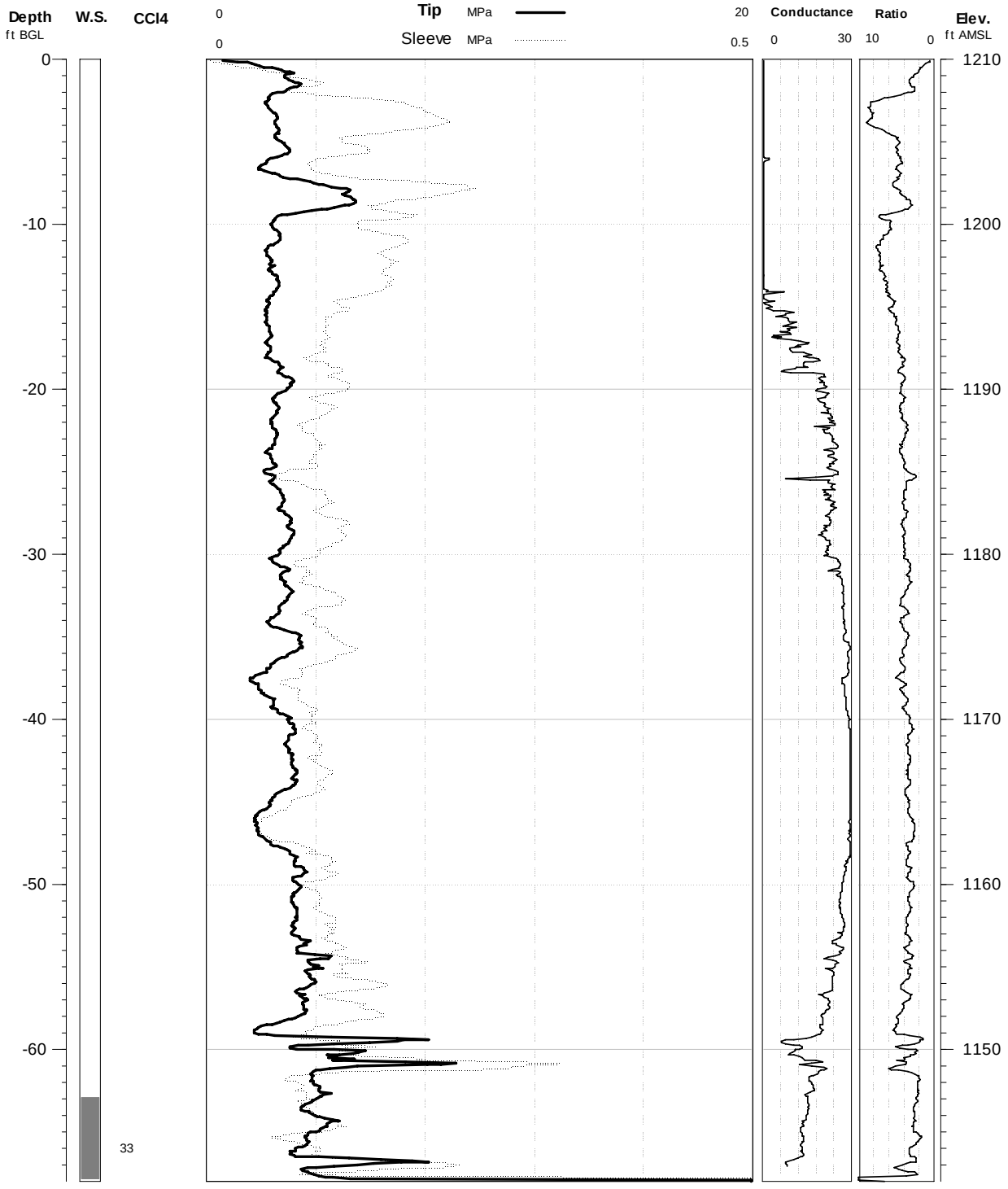
Carbon tetrachloride in water sample = micrograms/L

Argonne National Laboratory

Boring ID: TI-15

Project: Powhattan, KS **Elevation:** 1210.013 ft.

Geologist: Lisa Larsen **Depth:** 67.979 ft. BGL **Log Date:** 7/18/07



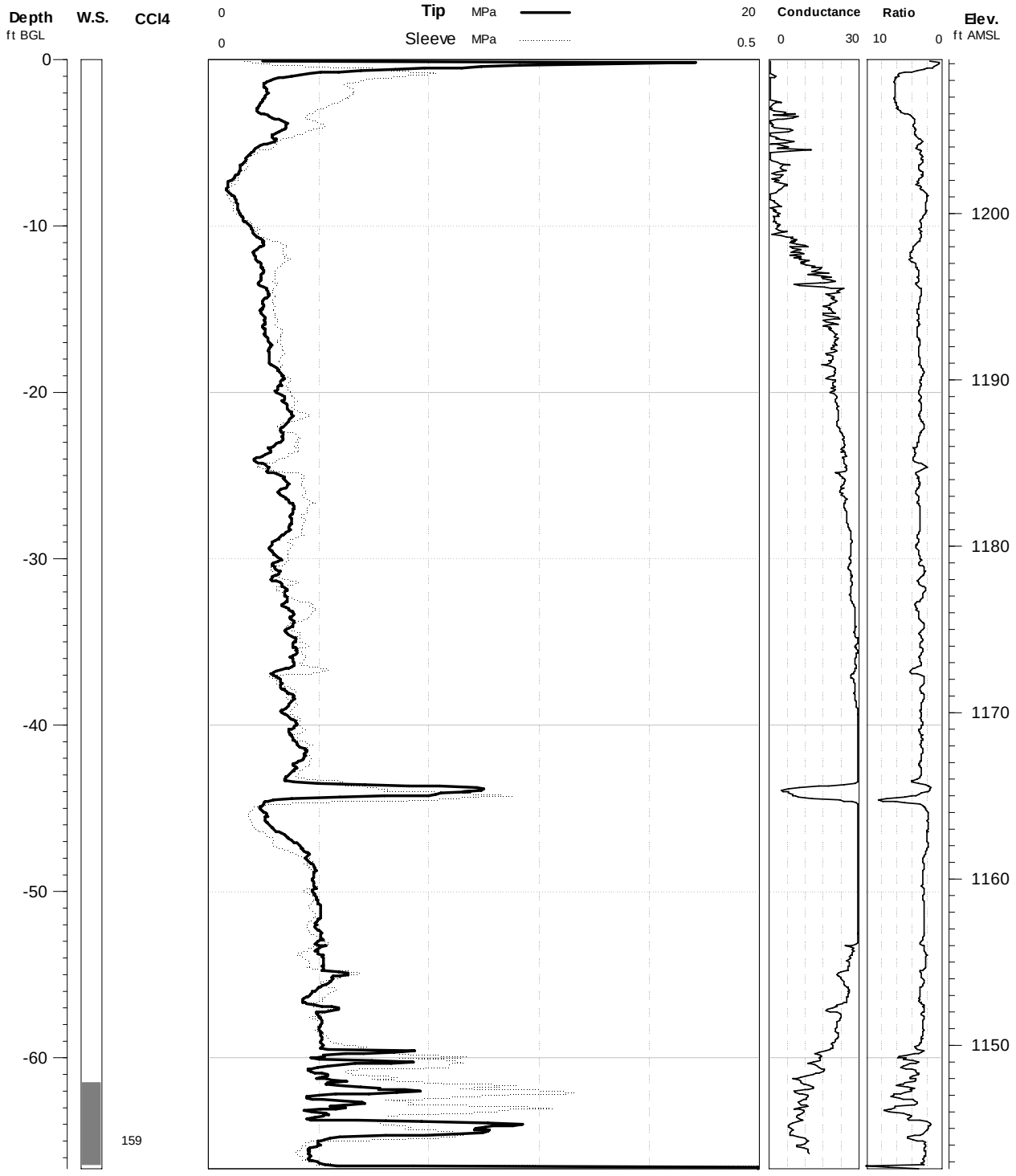
Carbon tetrachloride in water sample = micrograms/L

Argonne National Laboratory

Boring ID: TI-16

Project: Powhattan, KS
Elevation: 1209.216 ft.

Geologist: Lisa Larsen
Depth: 66.666 ft. BGL
Log Date: 7/18/07



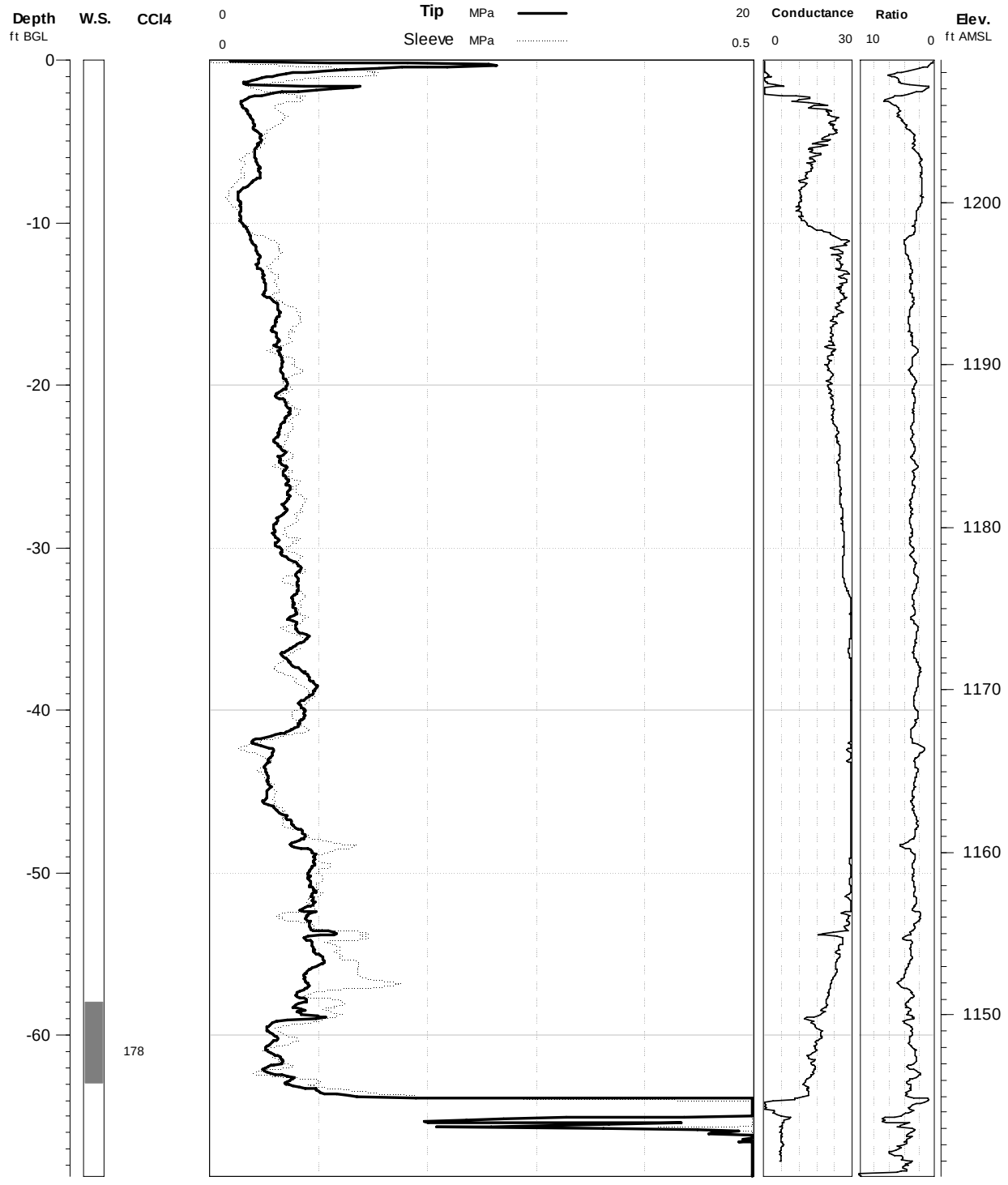
Carbon tetrachloride in w ater sample = micrograms/L

Argonne National Laboratory

Boring ID: TI-17

Project: Powhattan, KS **Elevation:** 1208.755 ft.

Geologist: Lisa Larsen **Depth:** 68.700 ft. BGL **Log Date:** 7/14/07



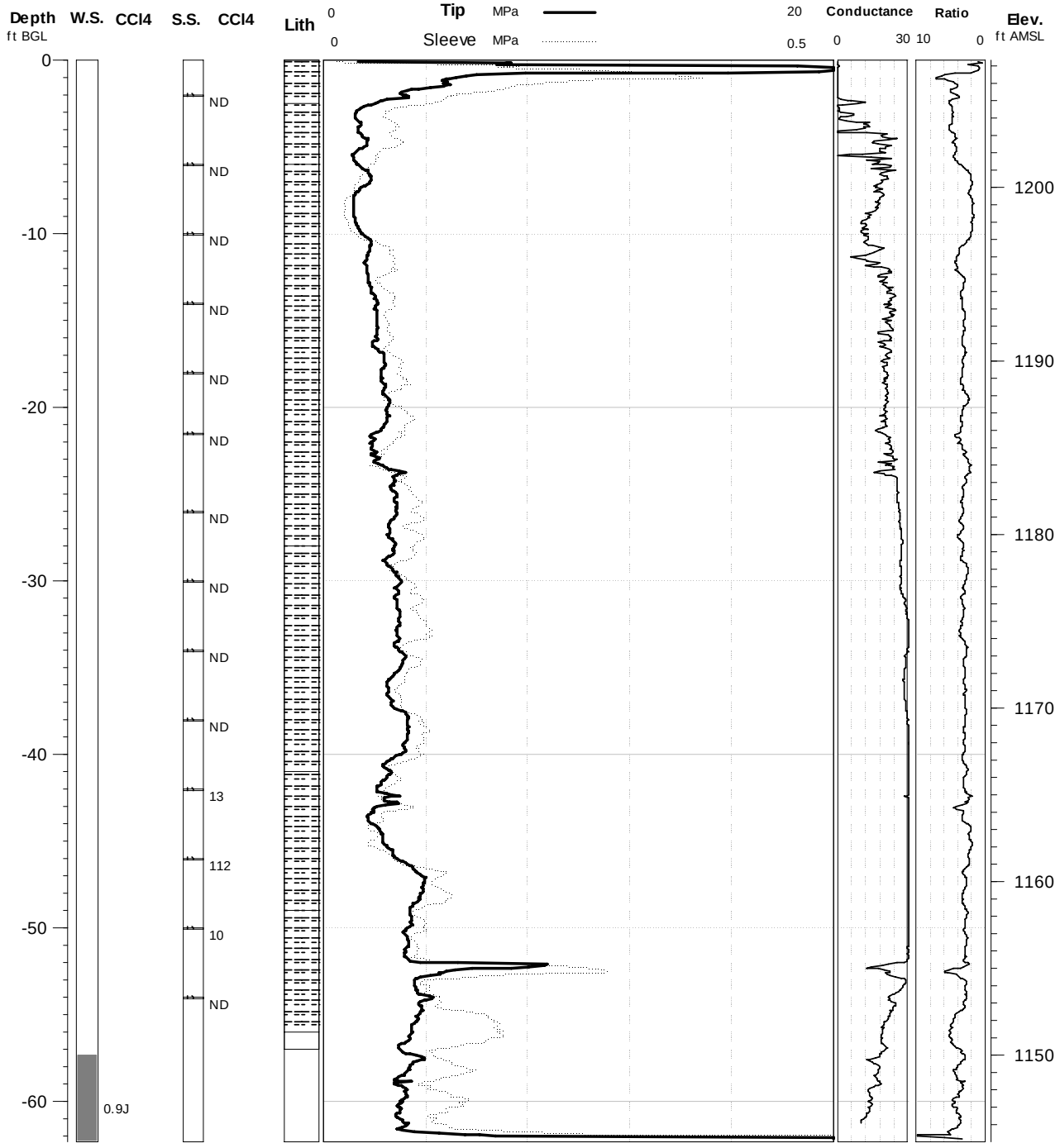
Carbon tetrachloride in water sample = micrograms/L

Argonne National Laboratory

Boring ID: TI-18

Project: Powhattan, KS **Elevation:** 1207.341 ft.

Geologist: Lisa Larsen **Depth:** 62.3 ft. BGL **Log Date:** 7/29-30/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: TI-18

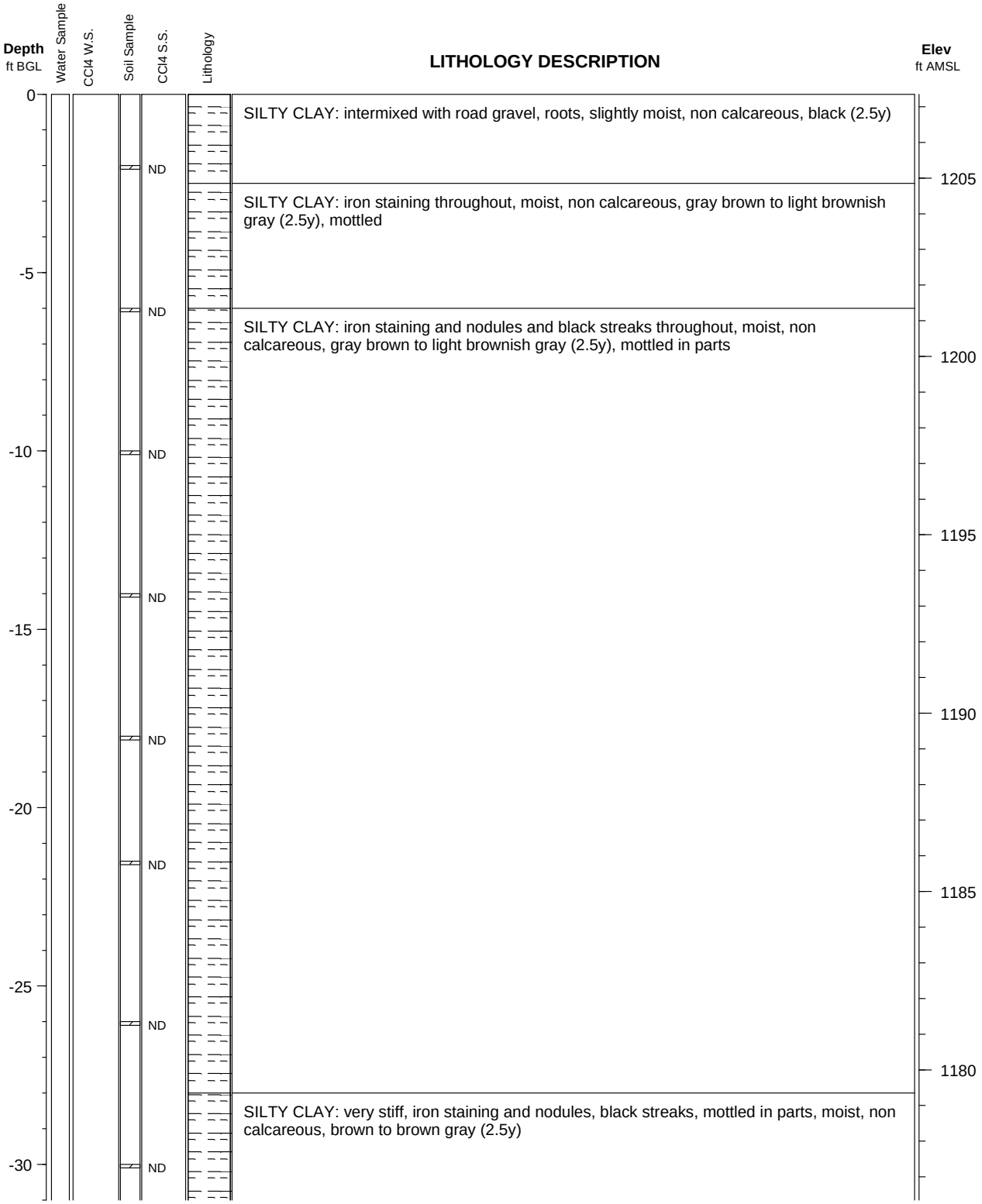
Project: Powhattan, KS

Elevation: 1207.341 ft.

Geologist: Lisa Larsen

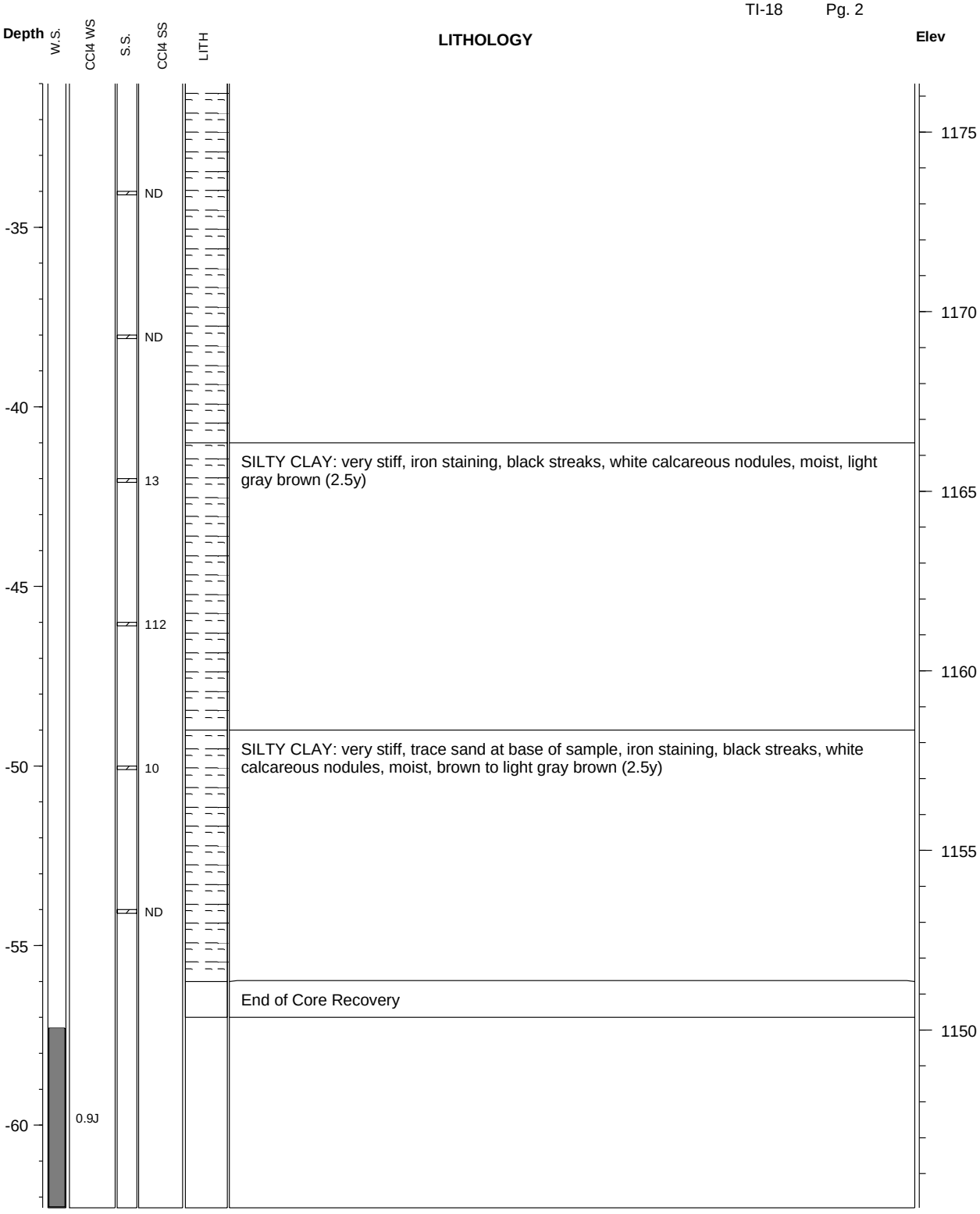
Depth: 62.3 ft. BGL

Log Date: 7/29-30/07



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

TI-18 Pg. 2



Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Project: Powhattan, KS

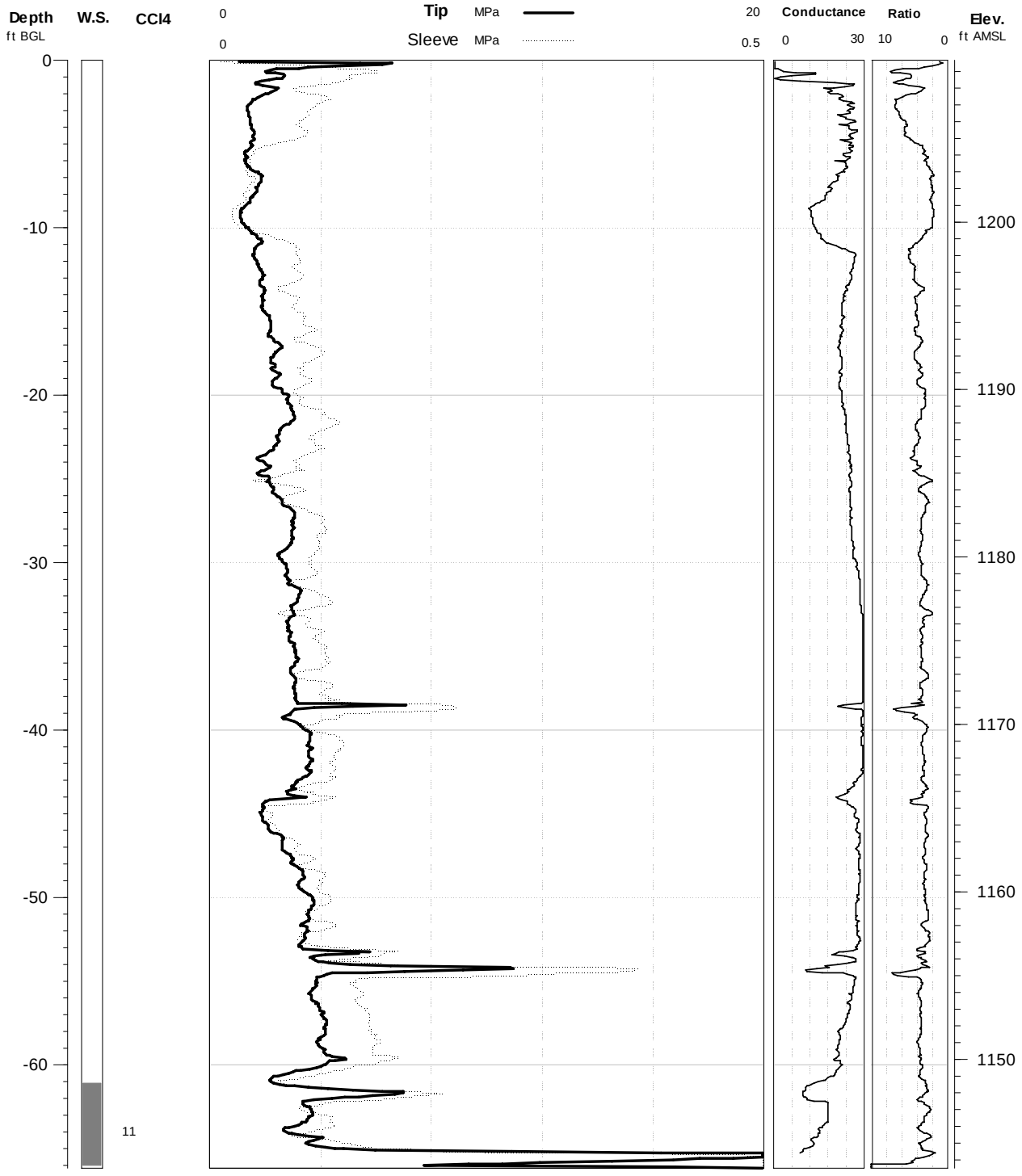
Geologist: Lisa Larsen

Elevation: 1209.704 ft.

Depth: 66.141 ft. BGL

Boring ID: TI-19

Log Date: 7/18/07



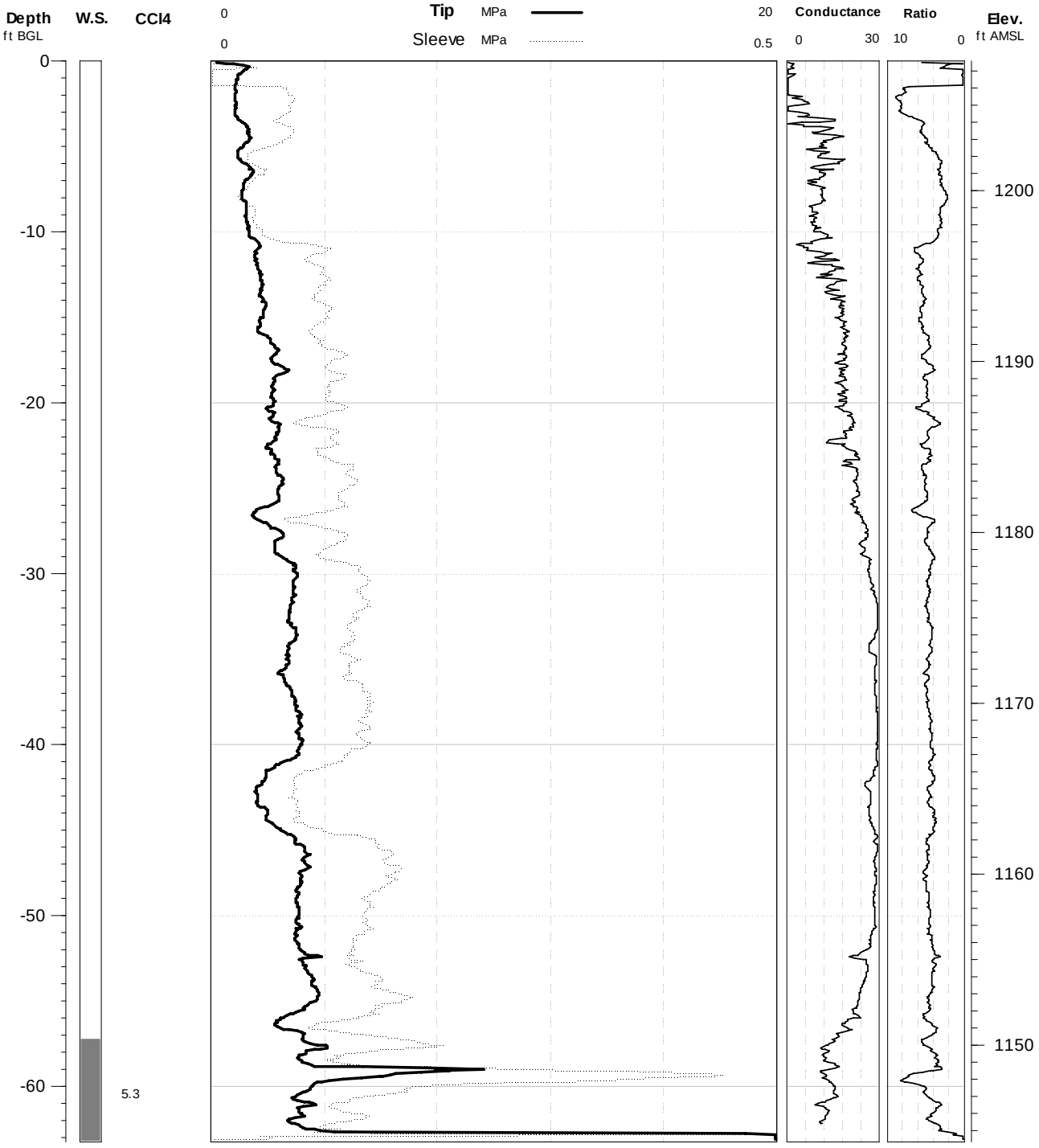
Carbon tetrachloride in w ater sample = micrograms/L

Argonne National Laboratory

Boring ID: TI-20

Project: Powhattan, KS **Elevation:** 1207.576 ft.

Geologist: Lisa Larsen **Depth:** 63.123 ft. BGL **Log Date:** 7/29/07



Carbon tetrachloride in water sample = micrograms/L

Argonne National Laboratory

Project: Powhattan, KS

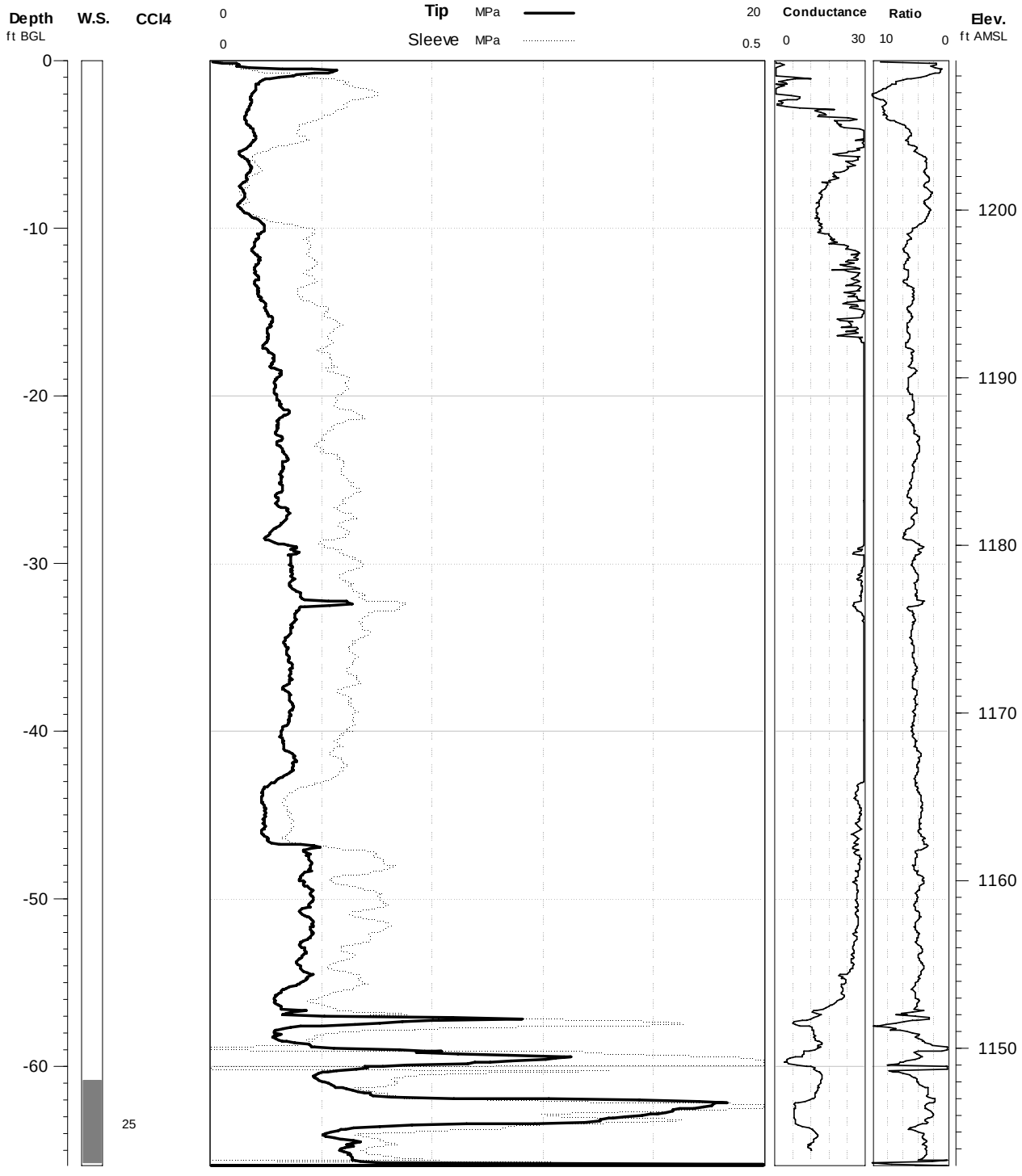
Geologist: Lisa Larsen

Elevation: 1208.945 ft.

Depth: 65.944 ft. BGL

Boring ID: TI-21

Log Date: 7/29/07



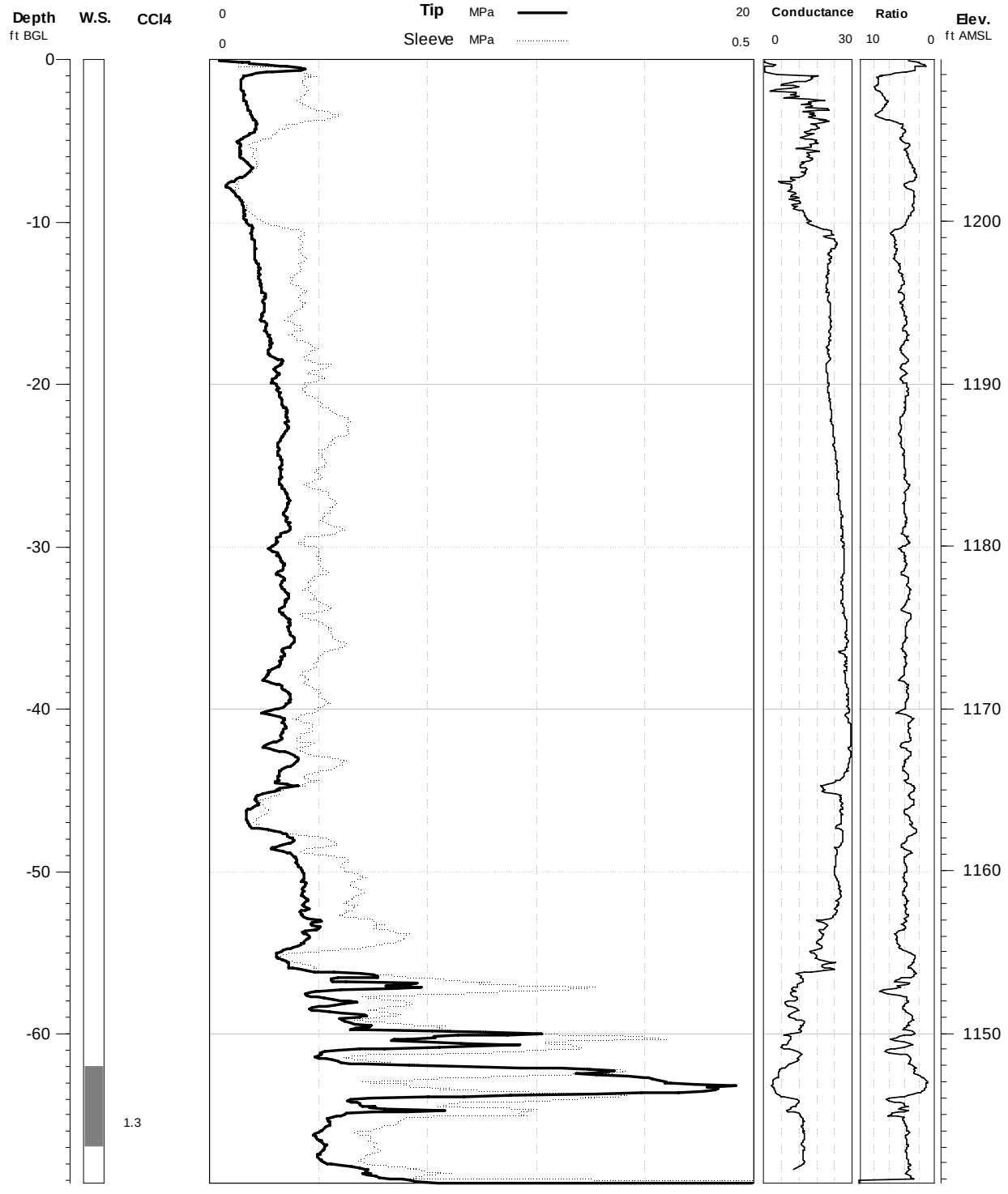
Carbon tetrachloride in w ater sample = micrograms/L

Argonne National Laboratory

Boring ID: TI-22

Project: Powhattan, KS
Elevation: 1209.958 ft.

Geologist: Lisa Larsen
Depth: 69.225 ft. BGL
Log Date: 7/26/07



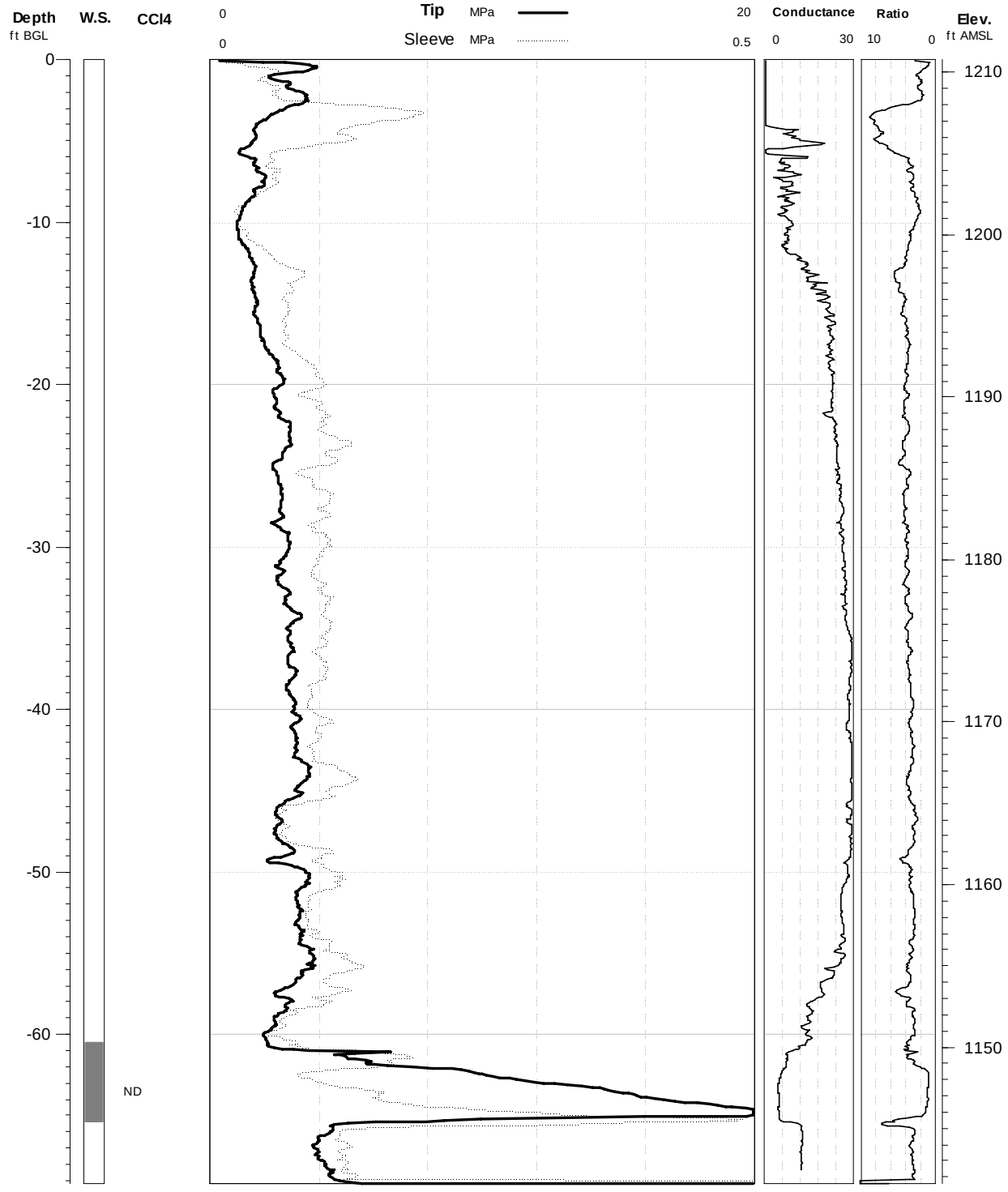
Carbon tetrachloride in water sample = micrograms/L

Argonne National Laboratory

Boring ID: TI-23

Project: Powhattan, KS **Elevation:** 1210.793 ft.

Geologist: Lisa Larsen **Depth:** 69.225 ft. BGL **Log Date:** 7/26/07



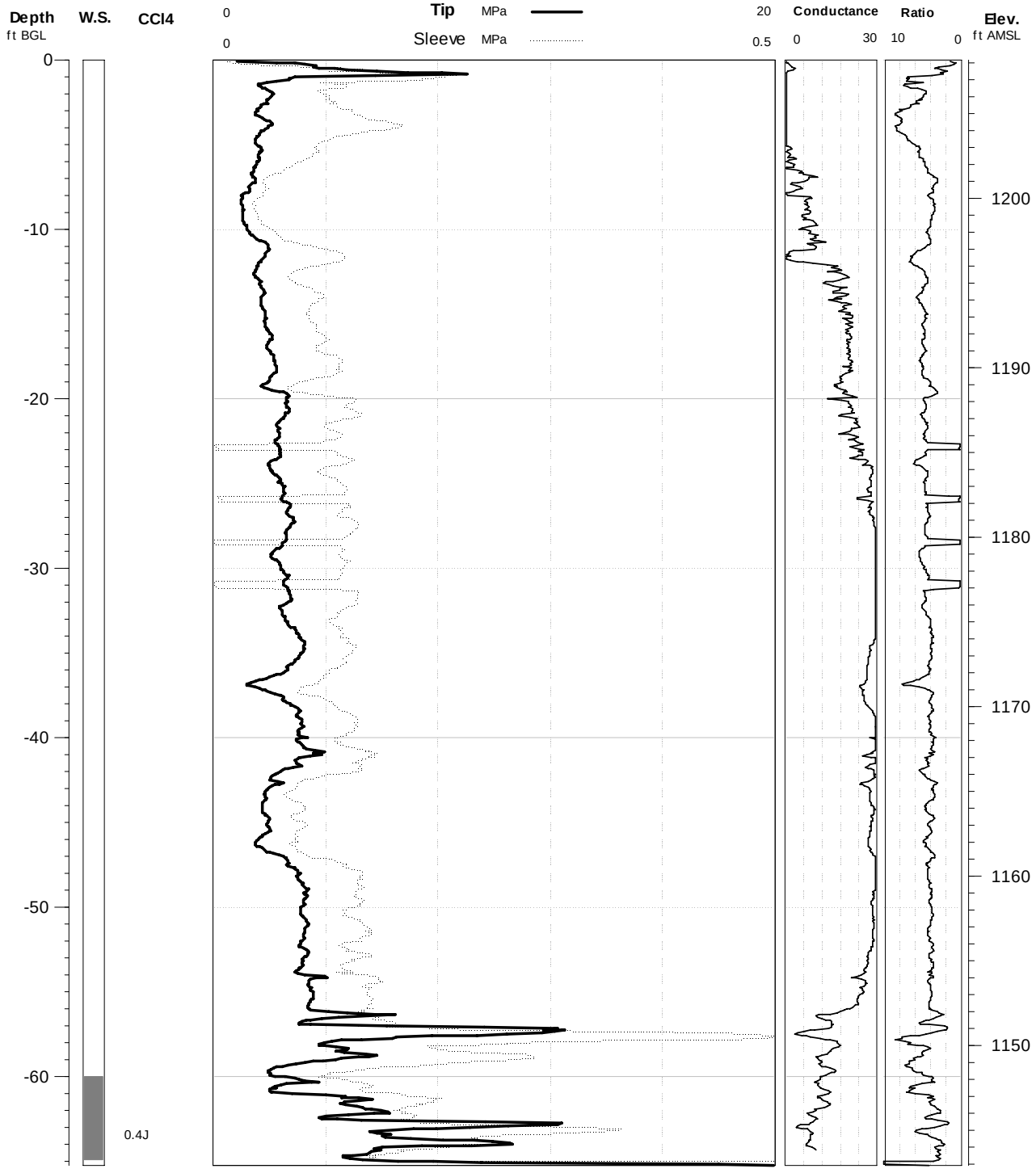
Carbon tetrachloride in water sample = micrograms/L

Argonne National Laboratory

Boring ID: TI-25

Project: Powhattan, KS
Elevation: 1208.172 ft.

Geologist: Lisa Larsen
Depth: 65.223 ft. BGL
Log Date: 7/27/07



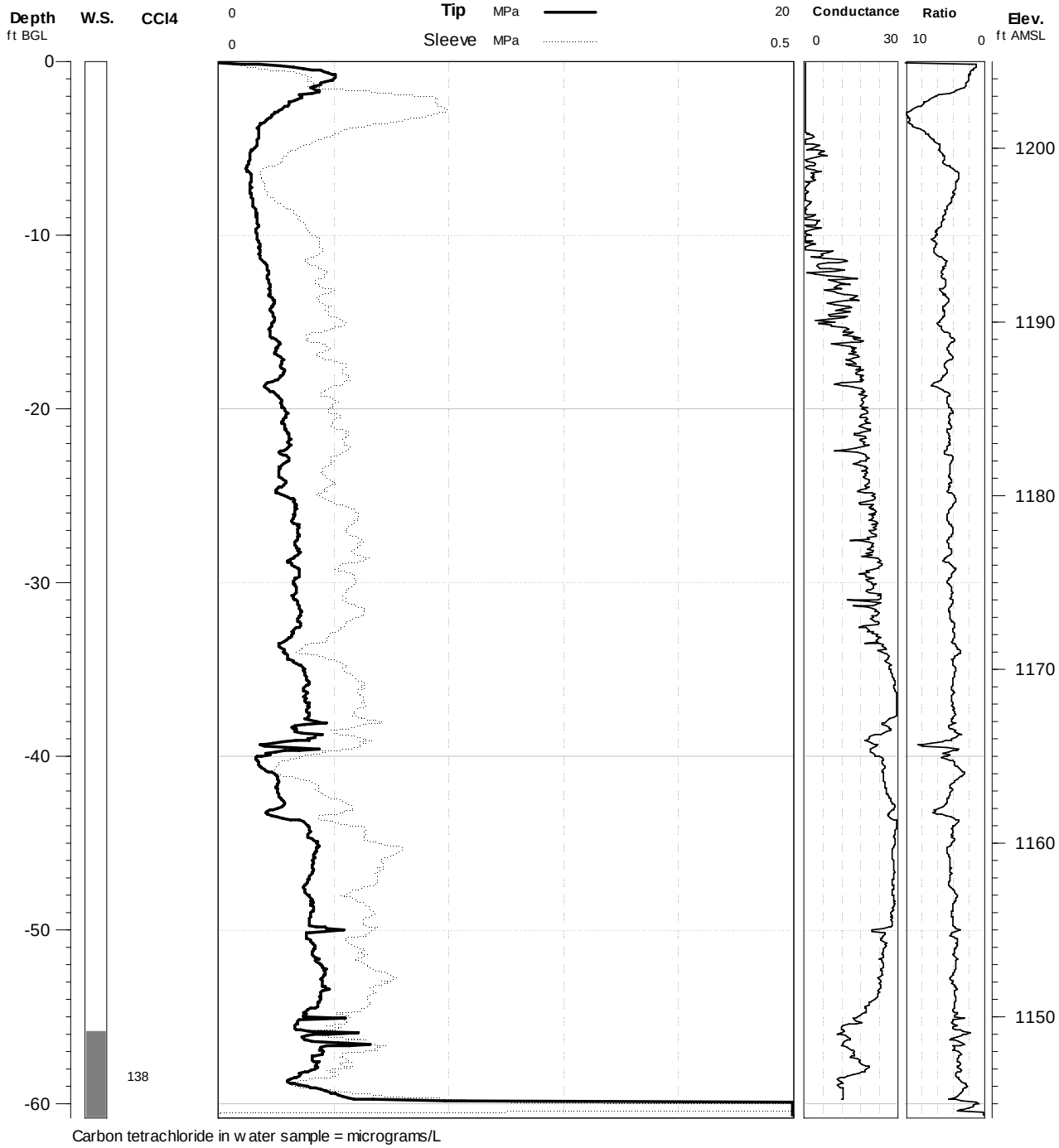
Carbon tetrachloride in water sample = micrograms/L

Argonne National Laboratory

Boring ID: TI-26

Project: Powhattan, KS
Elevation: 1204.996 ft.

Geologist: Lisa Larsen
Depth: 60.695 ft. BGL
Log Date: 7/27/07

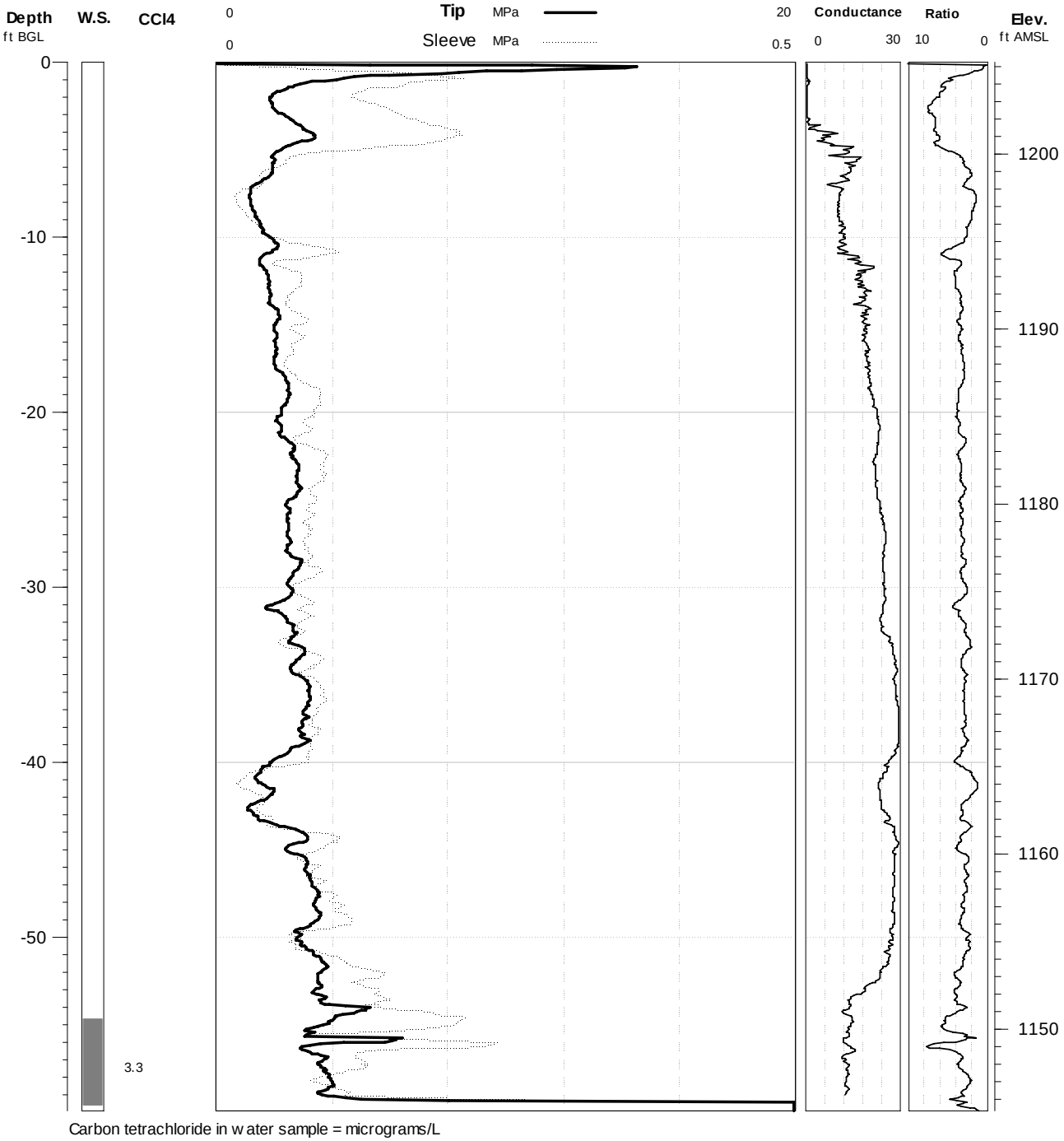


Argonne National Laboratory

Boring ID: TI-27

Project: Powhattan, KS **Elevation:** 1205.256 ft.

Geologist: Lisa Larsen **Depth:** 59.908 ft. BGL **Log Date:** 7/26/07

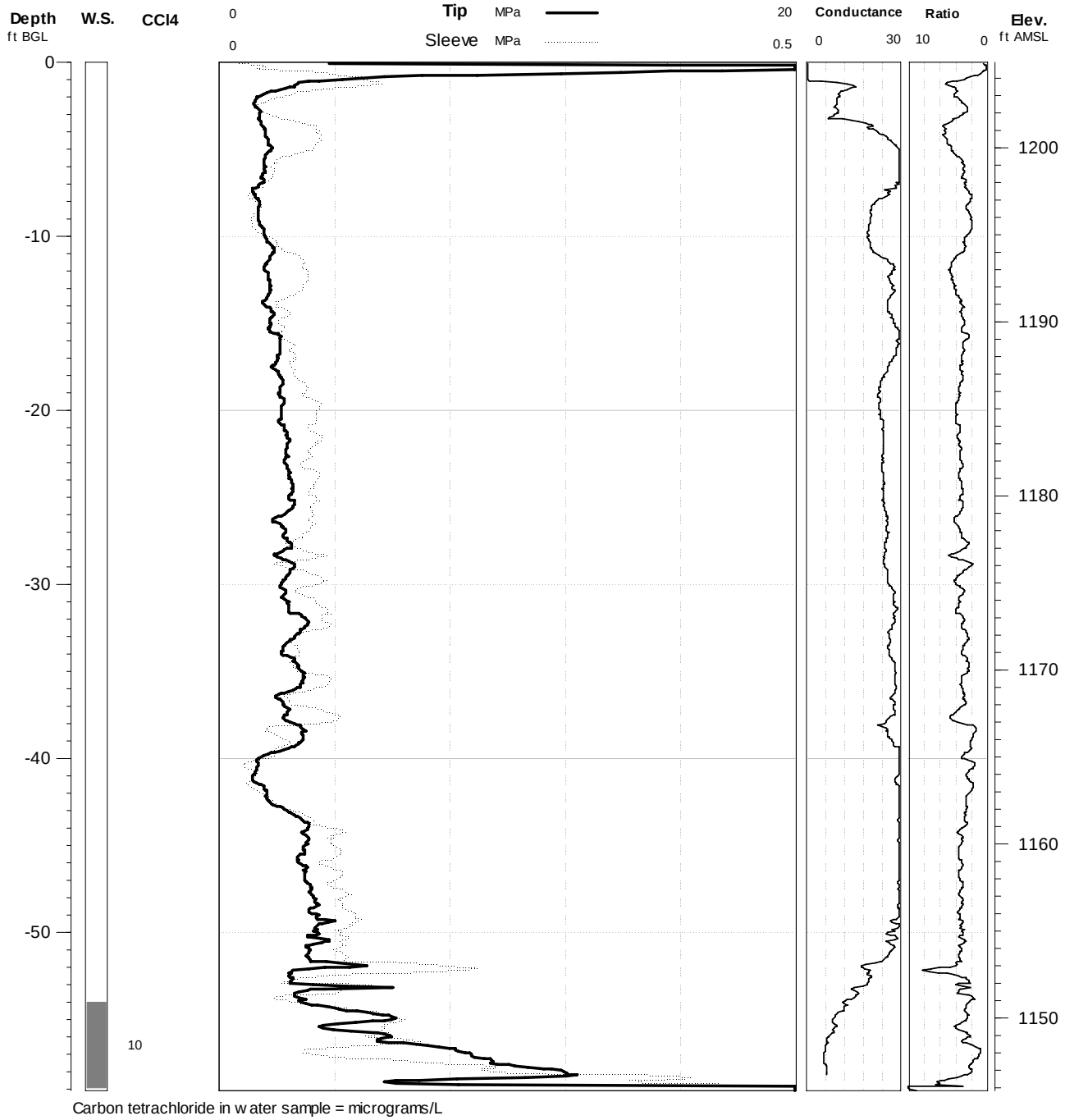


Carbon tetrachloride in water sample = micrograms/L

Argonne National Laboratory

Boring ID: TI-28

Project: Powhattan, KS
Elevation: 1204.932 ft.
Geologist: Lisa Larsen
Depth: 59.055 ft. BGL
Log Date: 7/26/07

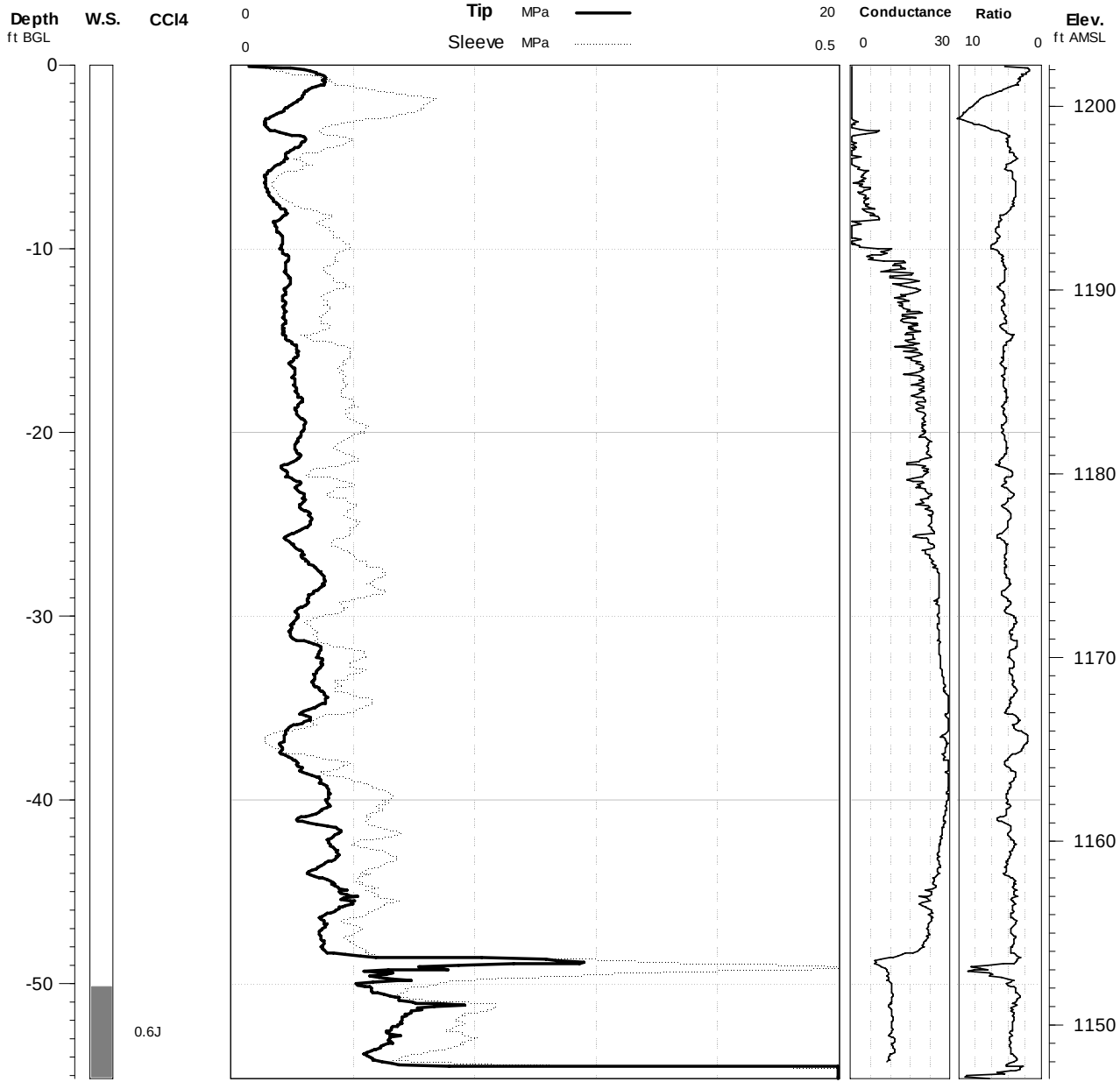


Argonne National Laboratory

Boring ID: TI-29

Project: Powhattan, KS
Elevation: 1202.291 ft.

Geologist: Lisa Larsen
Depth: 55.183 ft. BGL
Log Date: 7/27/07



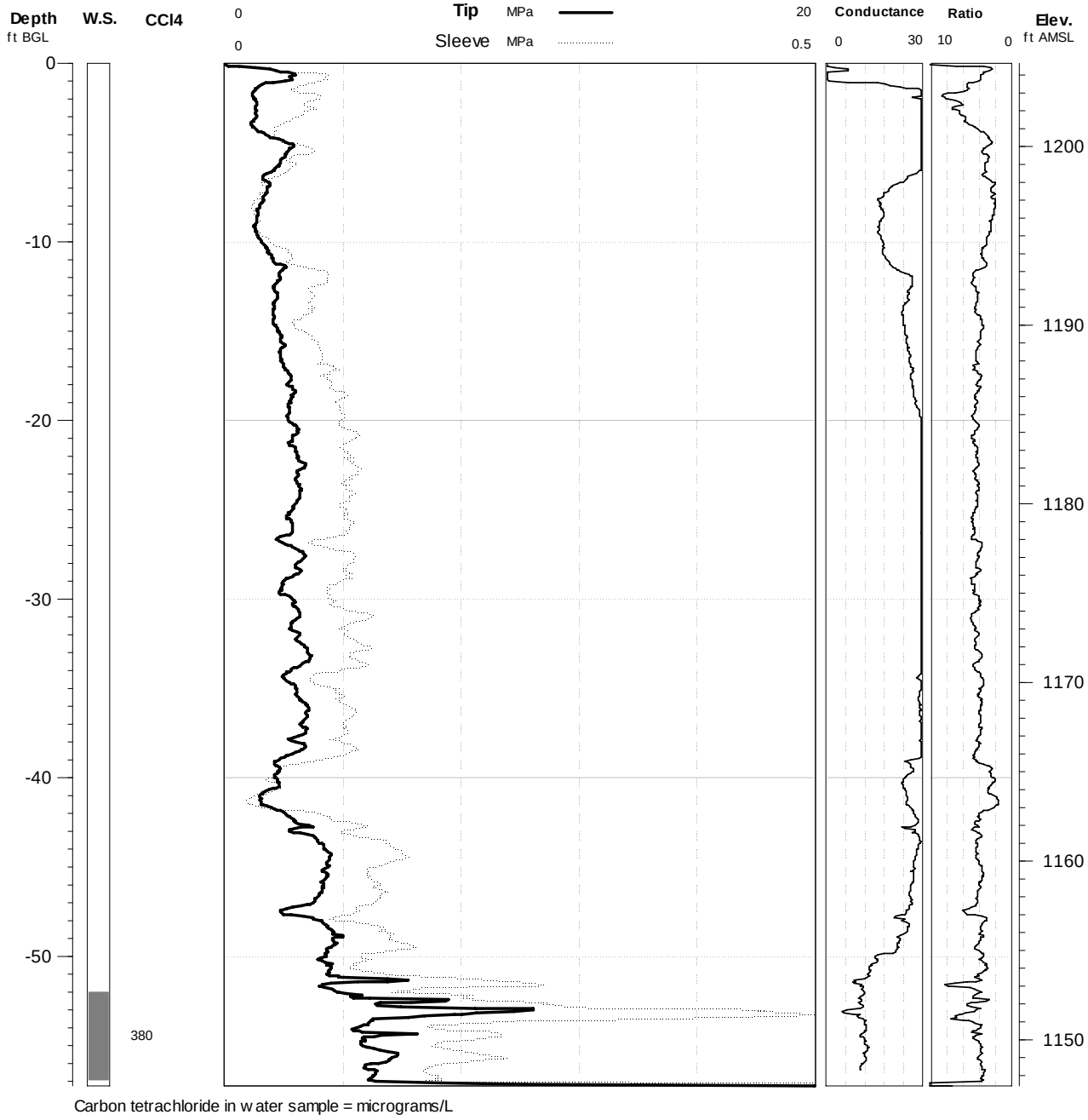
Carbon tetrachloride in w ater sample = micrograms/L

Argonne National Laboratory

Boring ID: TI-30

Project: Powhattan, KS
Elevation: 1204.689 ft.

Geologist: Lisa Larsen
Depth: 57.283 ft. BGL
Log Date: 7/27/07

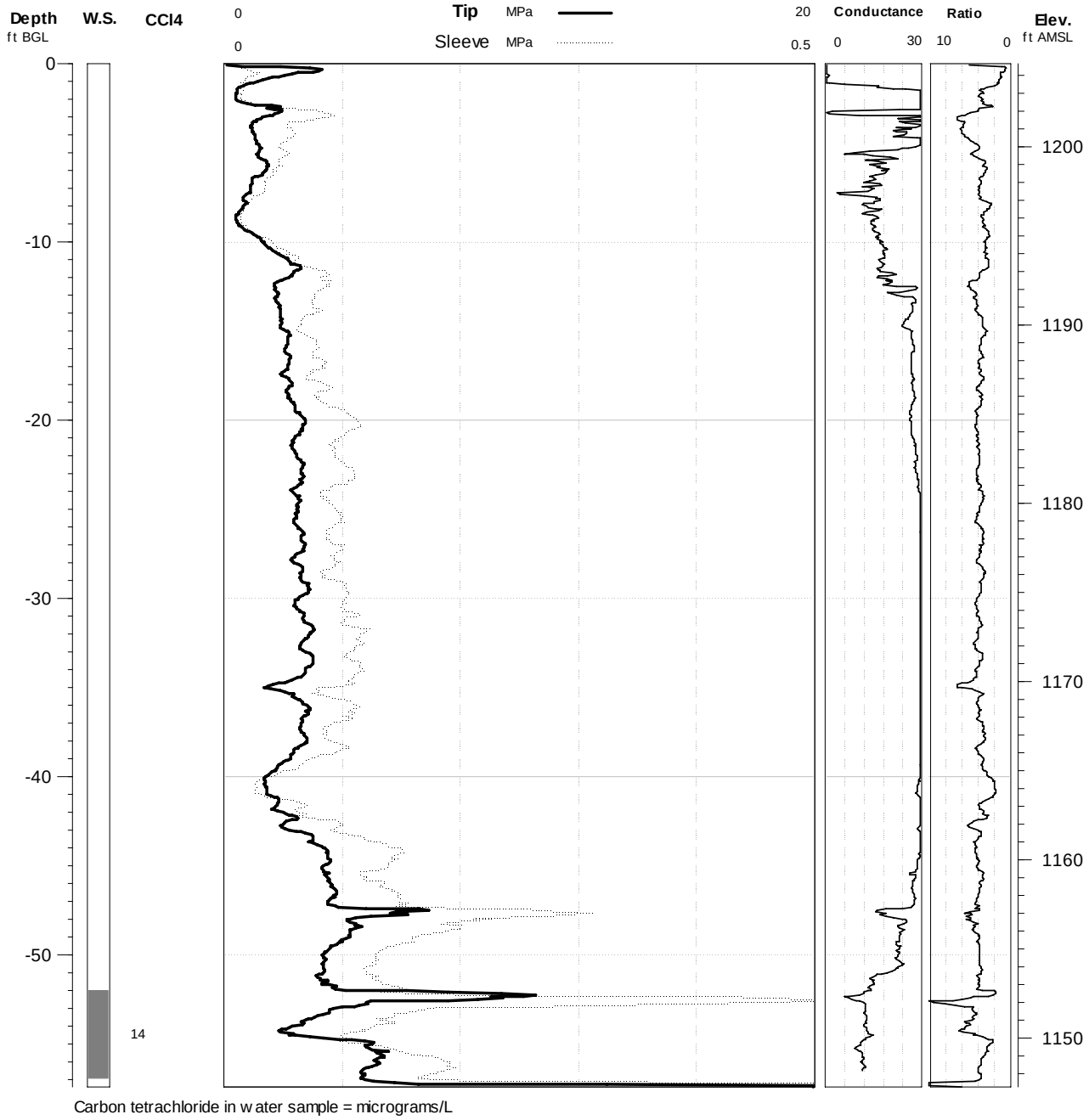


Carbon tetrachloride in water sample = micrograms/L

Argonne National Laboratory

Boring ID: TI-31

Project: Powhattan, KS
Elevation: 1204.687 ft.
Geologist: Lisa Larsen
Depth: 57.4147 ft. BGL
Log Date: 7/27/07



Carbon tetrachloride in water sample = micrograms/L

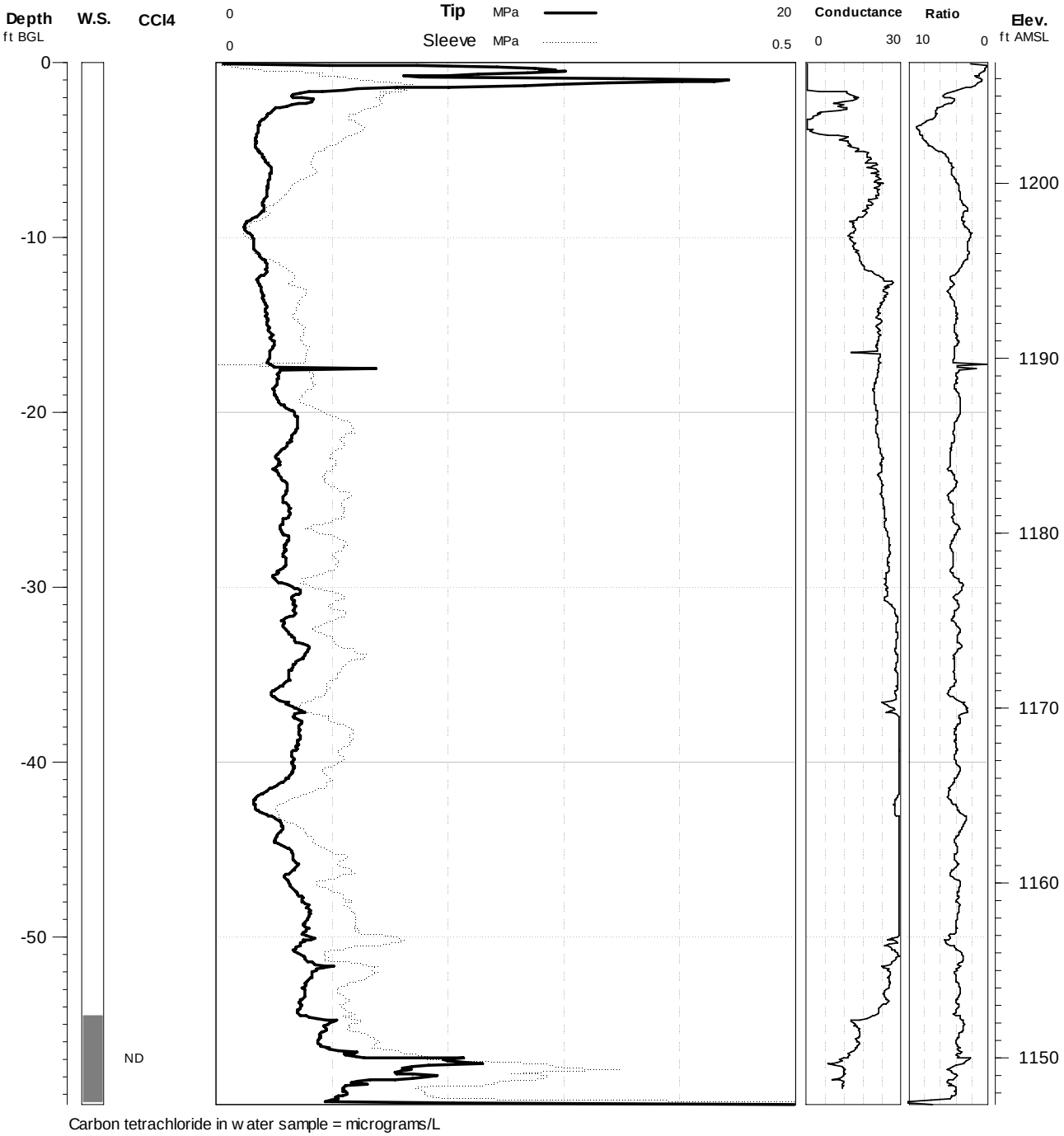
Argonne National Laboratory

Boring ID: TI-32

Project: Powhattan, KS
Elevation: 1206.887 ft.

Geologist: Lisa Larsen
Depth: 59.58 ft. BGL

Log Date: 7/28/07



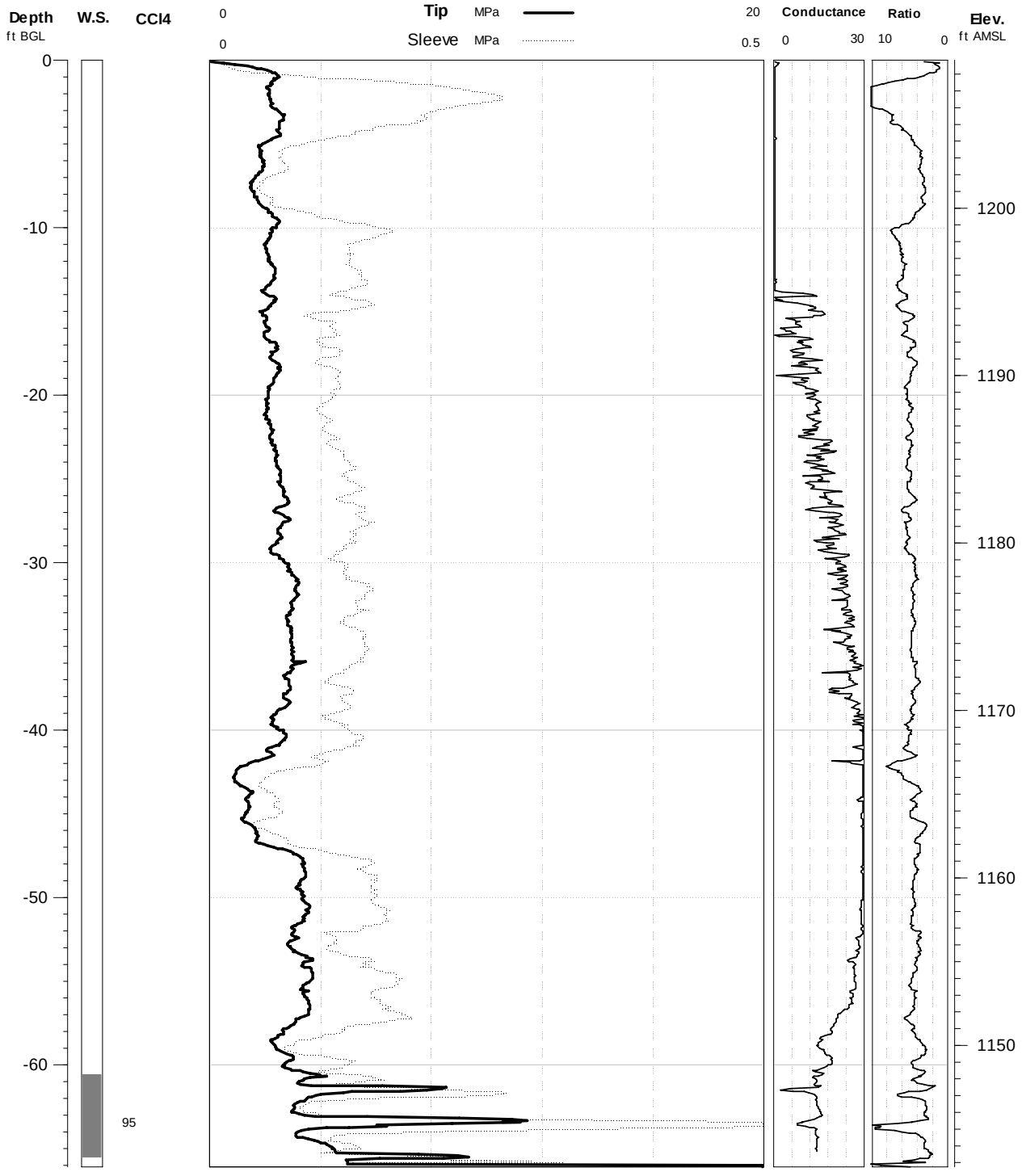
Carbon tetrachloride in water sample = micrograms/L

Argonne National Laboratory

Boring ID: TI-33

Project: Powhattan, KS **Elevation:** 1208.801 ft.

Geologist: Lisa Larsen **Depth:** 66.076 ft. BGL **Log Date:** 7/29/07



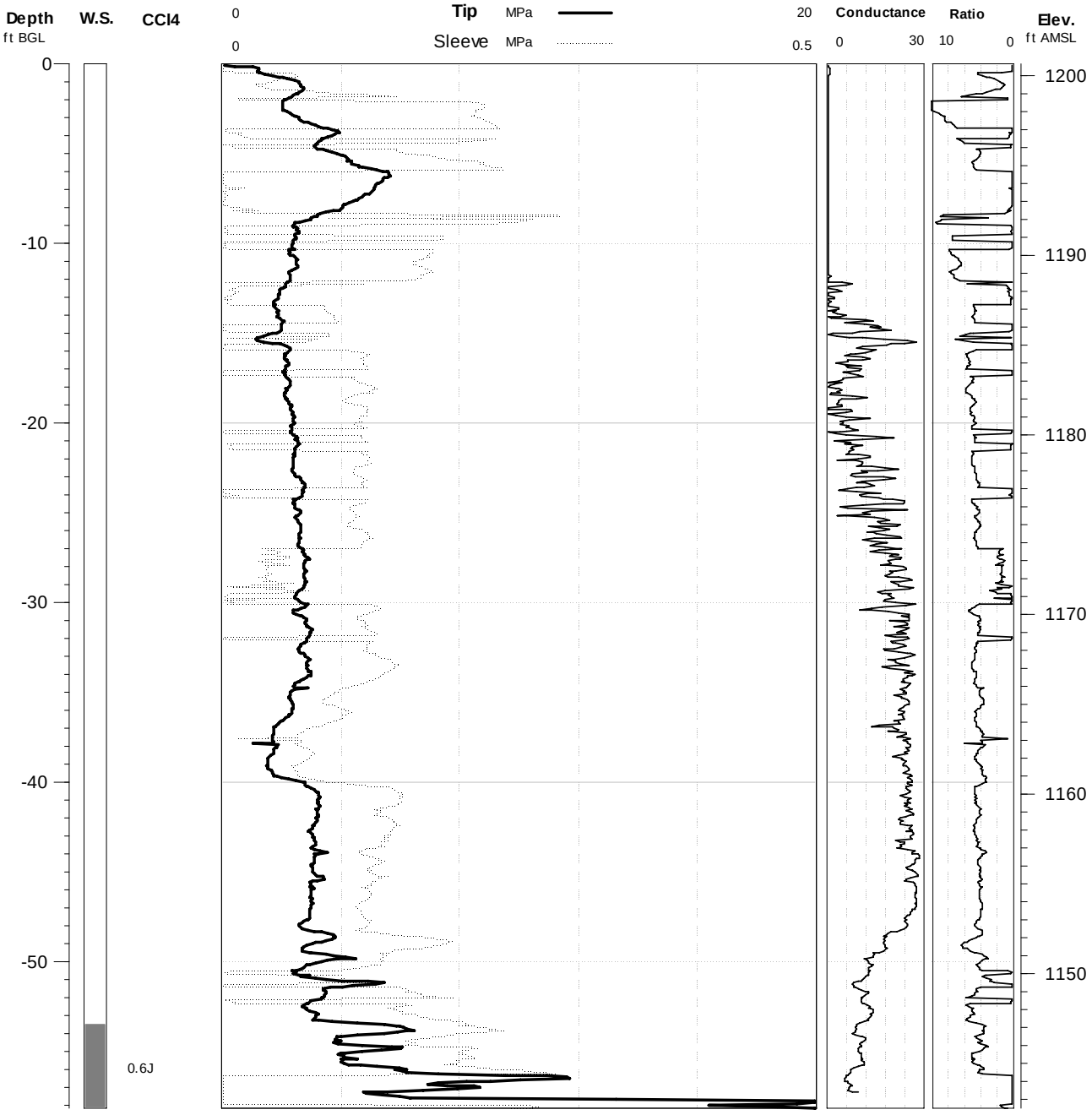
Carbon tetrachloride in w ater sample = micrograms/L

Argonne National Laboratory

Boring ID: TI-39

Project: Powhattan, KS **Elevation:** 1200.646 ft.

Geologist: Lisa Larsen **Depth:** 58.202 ft. BGL **Log Date:** 8/3/07



Carbon tetrachloride in water sample = micrograms/L

Argonne National Laboratory

Project: Powhattan, KS

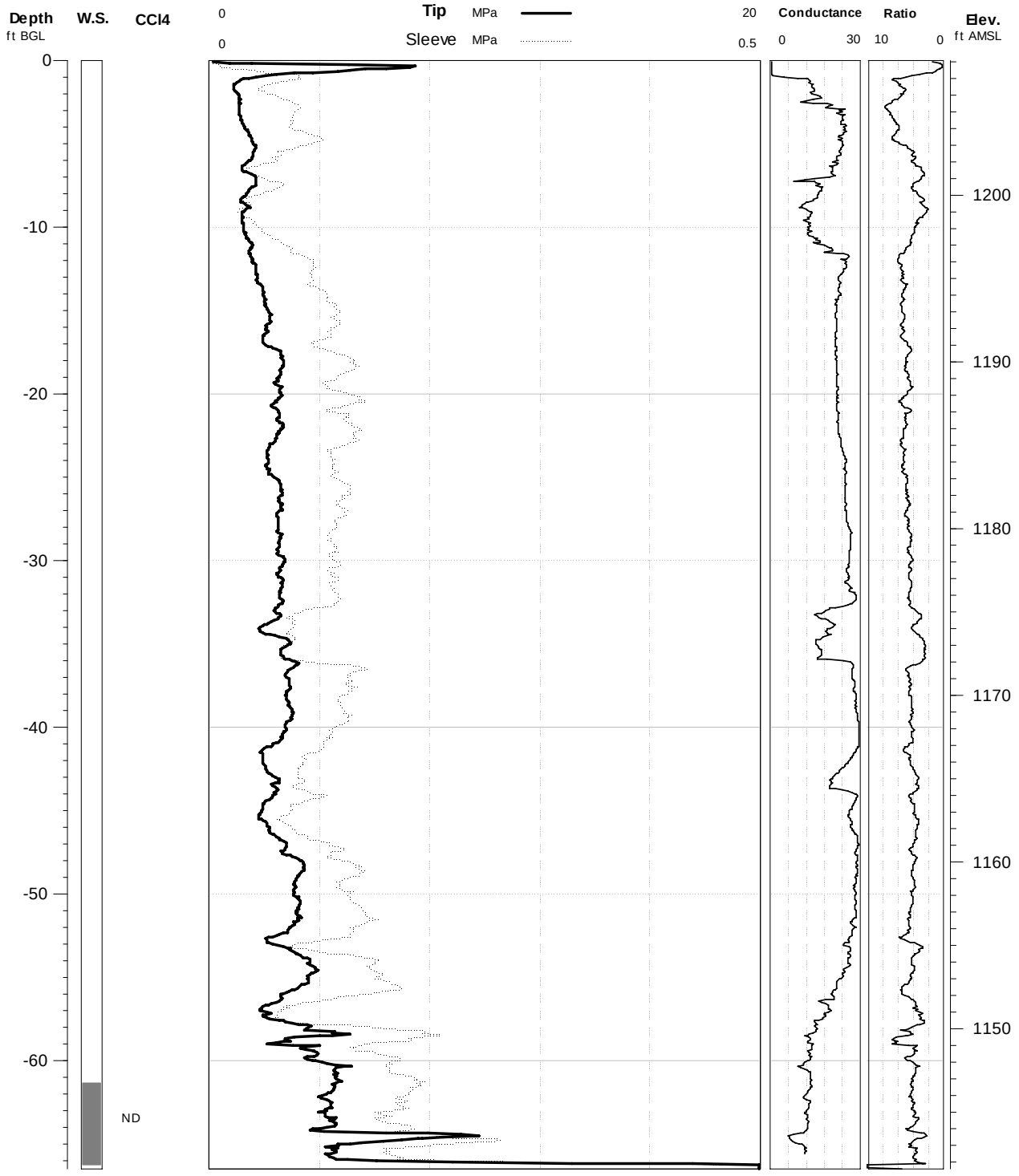
Geologist: Lisa Larsen

Elevation: 1208.051 ft.

Depth: 66.469 ft. BGL

Boring ID: TI-45

Log Date: 8/2/07



Carbon tetrachloride in w ater sample = micrograms/L

Appendix B:

Well Construction Diagrams and Well Registration Forms (WWC-5)

Monitor Well MW-11: Powhattan, KS

NW 1/4 of NE 1/4 of SW 1/4 of Section 28, Twp. 3 South, Rge. 16 East
Brown County, State of Kansas
Elevation: 1208.184’

Date: 08/25/07

WELL HEAD PROTECTION
12" Morrison Brothers, Co. Model 418XA flush mount cover. Top of casing is fitted with a (J-Plug) Morrison Brothers, Co. Model 678XA and padlock.

CONCRETE PAD
Minimum of 8" thick and extends at least 8" larger than the flush mount (28" minimum). Sloped at top to prevent pooling of water, vegetation around well, and allows for placement of a surveyor pin.

IMPERVIOUS GROUT
The well is grouted with impervious bentonite grout and tremied in the hole as required, mixed with clean fresh water to have a minimum density of 9.4 lbs. per gallon.

WELL CASING
Well casing is terminated as high as possible inside the flush mount and is capped with a (J-Plug) Morrison Brothers, Co. Model 678XA locking plug and padlock.

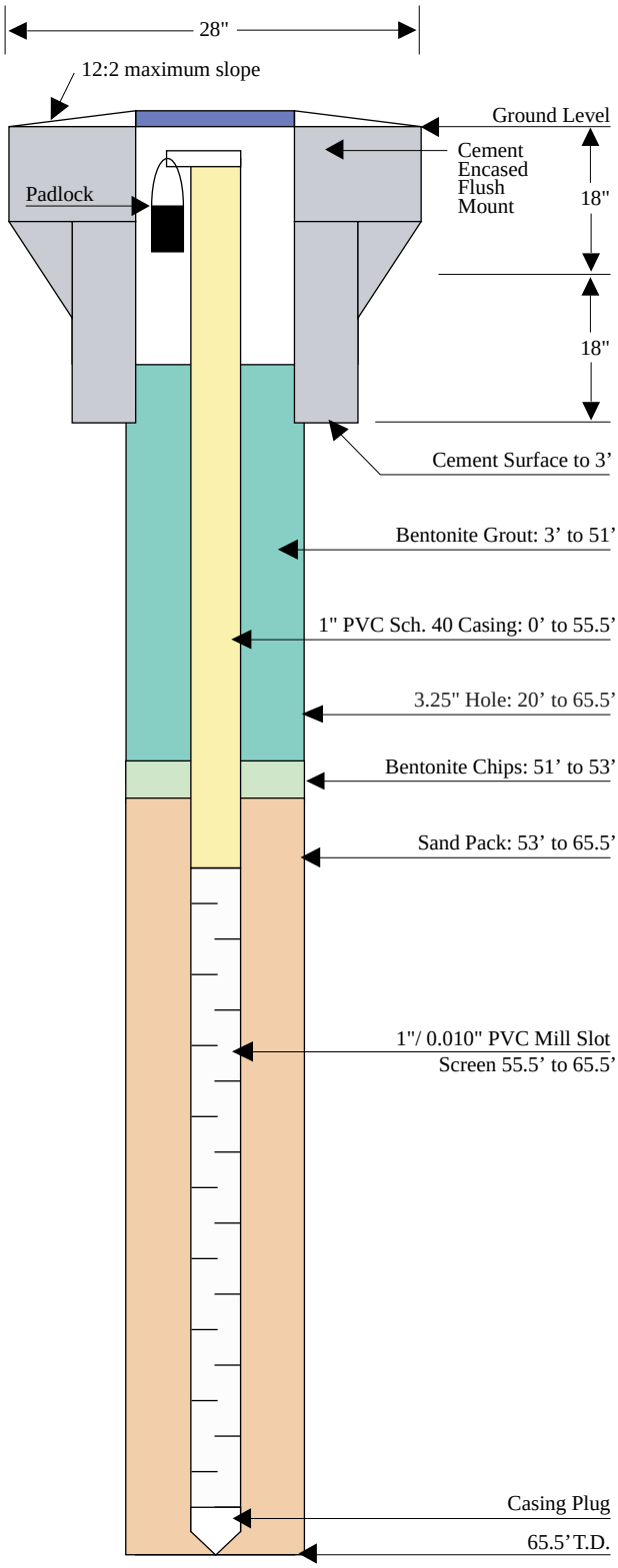
1" PVC Schedule 40 threaded casing and a Mill Slot (0.010") well screen were installed.

HOLE SIZE
The hole is 4.25" in diameter from the surface to 20’ below ground level and grouted from the top of the sand pack to the base of the flush mount.

GRAVEL / SAND PACK
Gravel/sand pack is a 1-/20 sand, from the bottom of the hole 2’ above the top of the screen.

CONTRACTOR LICENSING
The well was constructed under the direction of a licensed water well contractor as specified under the Kansas Department of Health and Environment regulation.

REGISTRATION
The well is registered with the Kansas Department of Health and Environment on form WWC-5 provided by that department.



(NOT TO SCALE)

WATER WELL RECORD **Form WWC-5** Division of Water Resources; App. No.

1 LOCATION OF WATER WELL: Fraction: NW ¼ NE ¼ SW ¼ | Section Number: **28** | Township Number: T **3** S | Range Number: R **16** E

County: **Brown**

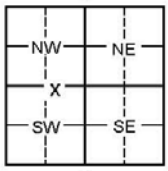
Distance and direction from nearest town or city street address of well if located within city?

Global Positioning System (decimal degrees, min. of 4 digits)
Latitude: N °
Longitude: W °

2 WATER WELL OWNER: **USDA/CCC**
RR#, St. Address, Box # : Stop 0513-RM 4725, 1400 Independence Ave. SW
City, State, ZIP Code : Washington DC, 20250

Datum: above mean sea level **1208.184**
Data Collection Method: **legal survey**

3 LOCATE WELL'S LOCATON WITH AN "X" IN SECTION BOX:



4 DEPTH OF COMPLETED WELL **65.5** ft.
MW11
Depth(s) Groundwater Encountered 1 ____ ft. 2 ____ ft. 3 ____ ft.
WELL'S STATIC WATER LEVEL ____ ft. below land surface measured on mo/day/yr ____
Pump test data: Well water was ____ ft. after ____ hours pumping ____ gpm
Est. Yield ____ gpm: Well water was ____ ft. after ____ hours pumping ____ gpm
WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well
1 Domestic 3 Feed lot 6 Oil field water supply 9 Dewatering 12 Other (Specify below)
2 Irrigation 4 Industrial 7 Domestic (lawn & garden) (10) Monitoring well
Was a chemical/bacteriological sample submitted to Department? Yes ____ No **X** ; If yes, mo/day/yrs
Sample was submitted ____ Water Well Disinfected? Yes ____ No **X**

5 TYPE OF CASING USED: 5 Wrought Iron 8 Concrete tile CASING JOINTS: Glued ____ Clamped ____
1 Steel 3 RMP (SR) 6 Asbestos-Cement 9 Other (specify below) Welded ____
(2) PVC 4 ABS 7 Fiberglass Threaded **X**
Blank casing diameter **1** in. to **55.5** ft., Dia ____ in. to ____ ft., Dia ____ in. to ____ ft.
Casing height below land surface **0.00** ft., Weight ____ lbs./ft. Wall thickness or gauge No. ____
TYPE OF SCREEN OR PERFORATION MATERIAL:
1 Steel 3 Stainless steel 5 Fiberglass (7) PVC 9 ABS 11 Other (specify)
2 Brass 4 Galvanized steel 6 Concrete tile 8 RM (SR) 10 Asbestos-Cement 12 None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE:
1 Continuous slot (3) Mill slot 5 Guaze wrapped 7 Torch cut 9 Drilled holes 11 None (open hole)
2 Louvered shutter 4 Key punched 6 Wire wrapped 8 Saw Cut 10 Other (specify)
SCREEN-PERFORATED INTERVALS: From **55.5** ft. to **65.5** ft. From ____ ft. to ____ ft.
GRAVEL PACK INTERVALS: From **53** ft. to **65.5** ft. From ____ ft. to ____ ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout (3) Bent. Grout (4) Other Bentonite Chips
Grout Intervals From **3** ft. to **51** ft. From **51** ft. to **53** ft. From ____ ft. to ____ ft.
What is the nearest source of possible contamination:
1 Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 13 Insecticide Storage 16 Other (specify below)
2 Sewer lines 5 Cess pool 8 Sewage lagoon 11 Fuel storage 14 Abandoned water well
3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage 15 Oil well/ gas well **Former Grain Storage Bins**
Direction from well? ____ How many feet? ____

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	2	**SILTY CLAY, trace silt, roots, very stiff, black to dark brown at depth**	6.25	18	**SILTY CLAY, iron staining, iron nodules, gray brown to brown to light brownish gray, moist**
2	5.5	**SILTY CLAY, stiff, iron staining and iron nodules, moist non calcareous, dark gray brown becoming lighter with depth, moist**	18	40	**SILTY CLAY, iron staining, trace white non calcareous nodules, wet at 22.1 ft, 26.7 ft, 29.6 ft, brown to light brown gray**
5.5	6.25	**CLAYEY SILT, trace clay, moist, non calcareous, light brown gray**	40	52	**SILTY CLAY, iron staining, white calcareous nodules to 43.5 ft, light brown gray to brown,moist**
					Flushmount waiver from Don Taylor, BOW

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/year) **8/25/07** and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. **757** . This Water Well Record was completed on (mo/day/year) **9/24/07** under the business name of **Larsen & Associates, Inc.** by (signature) ____ .

INSTRUCTIONS: Please fill in blanks or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one to WATER WELL OWNER and retain one for your records. Fee of $5.00 for each constructed well. Visit us at http://www.kdheks.gov/waterwell.

KSA 82a-1212

Form provided by Forms-On-A-Disk, Inc. · Dallas, Texas · (214) 340-9429

Monitor Well MW-12: Powhattan, KS

NW 1/4 of NE 1/4 of SW 1/4 of Section 28, Twp. 3 South, Rge. 16 East
Brown County, State of Kansas
Elevation: 1206.846’

Date: 08/25/07

WELL HEAD PROTECTION
12" Morrison Brothers, Co. Model 418XA flush mount cover. Top of casing is fitted with a (J-Plug) Morrison Brothers, Co. Model 678XA and padlock.

CONCRETE PAD
Minimum of 8" thick and extends at least 8" larger than the flush mount (28" minimum). Sloped at top to prevent pooling of water, vegetation around well, and allows for placement of a surveyor pin.

IMPERVIOUS GROUT
The well is grouted with impervious bentonite grout and tremied in the hole as required, mixed with clean fresh water to have a minimum density of 9.4 lbs. per gallon.

WELL CASING
Well casing is terminated as high as possible inside the flush mount and is capped with a (J-Plug) Morrison Brothers, Co. Model 678XA locking plug and padlock.

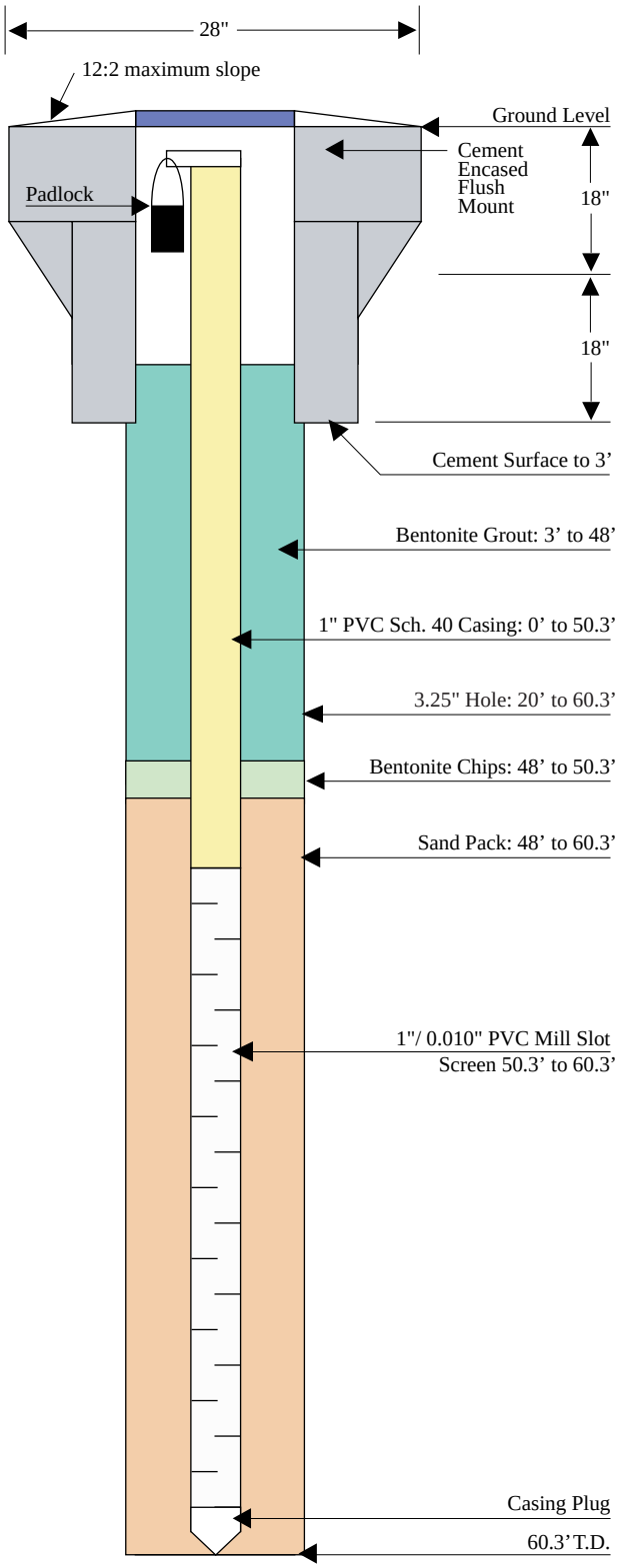
1" PVC Schedule 40 threaded casing and a Mill Slot (0.010") well screen were installed.

HOLE SIZE
The hole is 4.25" in diameter from the surface to 20’ below ground level and grouted from the top of the sand pack to the base of the flush mount.

GRAVEL / SAND PACK
Gravel/sand pack is a 1-/20 sand, from the bottom of the hole 2’ above the top of the screen.

CONTRACTOR LICENSING
The well was constructed under the direction of a licensed water well contractor as specified under the Kansas Department of Health and Environment regulation.

REGISTRATION
The well is registered with the Kansas Department of Health and Environment on form WWC-5 provided by that department.



(NOT TO SCALE)

WATER WELL RECORD **Form WWC-5** Division of Water Resources; App. No.

1 LOCATION OF WATER WELL: County: **Brown** | Fraction: NW ¼ NE ¼ SW ¼ | Section Number: **28** | Township Number: T **3** S | Range Number: R **16** E

Distance and direction from nearest town or city street address of well if located within city?

Global Positioning System (decimal degrees, min. of 4 digits)
Latitude: N °
Longitude: W °
Datum: above mean sea level
1206.846
Data Collection Method: **legal survey**

2 WATER WELL OWNER: **USDA/CCC**
RR#, St. Address, Box # : Stop 0513-RM 4725, 1400 Independence Ave. SW
City, State, ZIP Code : Washington DC, 20250

3 LOCATE WELL'S LOCATON WITH AN "X" IN SECTION BOX:

N / NW / NE / W / X / E / SW / SE / S

4 DEPTH OF COMPLETED WELL **60.3** ft.
MW12
Depth(s) Groundwater Encountered 1 _____ ft. 2 _____ ft. 3 _____ ft.
WELL'S STATIC WATER LEVEL _____ ft. below land surface measured on mo/day/yr _____
Pump test data: Well water was _____ ft. after _____ hours pumping _____ gpm
Est. Yield _____ gpm: Well water was _____ ft. after _____ hours pumping _____ gpm
WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well
1 Domestic 3 Feed lot 6 Oil field water supply 9 Dewatering 12 Other (Specify below)
2 Irrigation 4 Industrial 7 Domestic (lawn & garden) (10) Monitoring well _____
Was a chemical/bacteriological sample submitted to Department? Yes ____ No **X** ; If yes, mo/day/yrs
Sample was submitted _____ Water Well Disinfected? Yes ____ No **X**

5 TYPE OF CASING USED: 5 Wrought Iron 8 Concrete tile CASING JOINTS: Glued ____ Clamped ____
1 Steel 3 RMP (SR) 6 Asbestos-Cement 9 Other (specify below) Welded ____
(2) PVC 4 ABS 7 Fiberglass _____ Threaded **X**
Blank casing diameter **1** in. to **50.3** ft., Dia _____ in. to _____ ft., Dia _____ in. to _____ ft.
Casing height below land surface **0.00** ft., Weight _____ lbs./ft. Wall thickness or gauge No. _____
TYPE OF SCREEN OR PERFORATION MATERIAL:
1 Steel 3 Stainless steel 5 Fiberglass (7) PVC 9 ABS 11 Other (specify) _____
2 Brass 4 Galvanized steel 6 Concrete tile 8 RM (SR) 10 Asbestos-Cement 12 None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE:
1 Continuous slot (3) Mill slot 5 Guaze wrapped 7 Torch cut 9 Drilled holes 11 None (open hole)
2 Louvered shutter 4 Key punched 6 Wire wrapped 8 Saw Cut 10 Other (specify) _____
SCREEN-PERFORATED INTERVALS: From **50.3** ft. to **60.3** ft. From _____ ft. to _____ ft.
GRAVEL PACK INTERVALS: From **48** ft. to **60.3** ft. From _____ ft. to _____ ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout (3) Bent. Grout (4) Other Bentonite Chips
Grout Intervals From **3** ft. to **48** ft. From **48** ft. to **50.3** ft. From _____ ft. to _____ ft.
What is the nearest source of possible contamination:
1 Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 13 Insecticide Storage 16 Other (specify below) **Former Grain Storage Bins**
2 Sewer lines 5 Cess pool 8 Sewage lagoon 11 Fuel storage 14 Abandoned water well
3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage 15 Oil well/ gas well
Direction from well? _____ How many feet? _____

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	**2.5**	**SILTY CLAY, intermixed with road gravel, moist, black**			
2.5	**29**	**SILTY CLAY, iron staining, black streaks, some mottling, gray brown to light brown gray to gray,**			
29	**51**	**SILTY CLAY, very silty, iron staining, black streaks, white calcareous nodules at 29.5 ft, 32 ft, and 50 ft, moist**			
					Flushmount waiver from Don Taylor, BOW

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/year) **8/25/07** and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. **757** . This Water Well Record was completed on (mo/day/year) **10/4/07** under the business name of **Larsen & Associates, Inc.** by (signature) _____ .

INSTRUCTIONS: Please fill in blanks or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one to WATER WELL OWNER and retain one for your records. Fee of $5.00 for each constructed well. Visit us at http://www.kdheks.gov/waterwell.

KSA 82a-1212

Form provided by Forms-On-A-Disk, Inc. · Dallas, Texas · (214) 340-9429

Monitor Well MW-13: Powhattan, KS

NW 1/4 of NE 1/4 of SW 1/4 of Section 28, Twp. 3 South, Rge. 16 East
Brown County, State of Kansas
Elevation: 1207.611’

Date: 08/25/07

WELL HEAD PROTECTION
12" Morrison Brothers, Co. Model 418XA flush mount cover. Top of casing is fitted with a (J-Plug) Morrison Brothers, Co. Model 678XA and padlock.

CONCRETE PAD
Minimum of 8" thick and extends at least 8" larger than the flush mount (28" minimum). Sloped at top to prevent pooling of water, vegetation around well, and allows for placement of a surveyor pin.

IMPERVIOUS GROUT
The well is grouted with impervious bentonite grout and tremied in the hole as required, mixed with clean fresh water to have a minimum density of 9.4 lbs. per gallon.

WELL CASING
Well casing is terminated as high as possible inside the flush mount and is capped with a (J-Plug) Morrison Brothers, Co. Model 678XA locking plug and padlock.

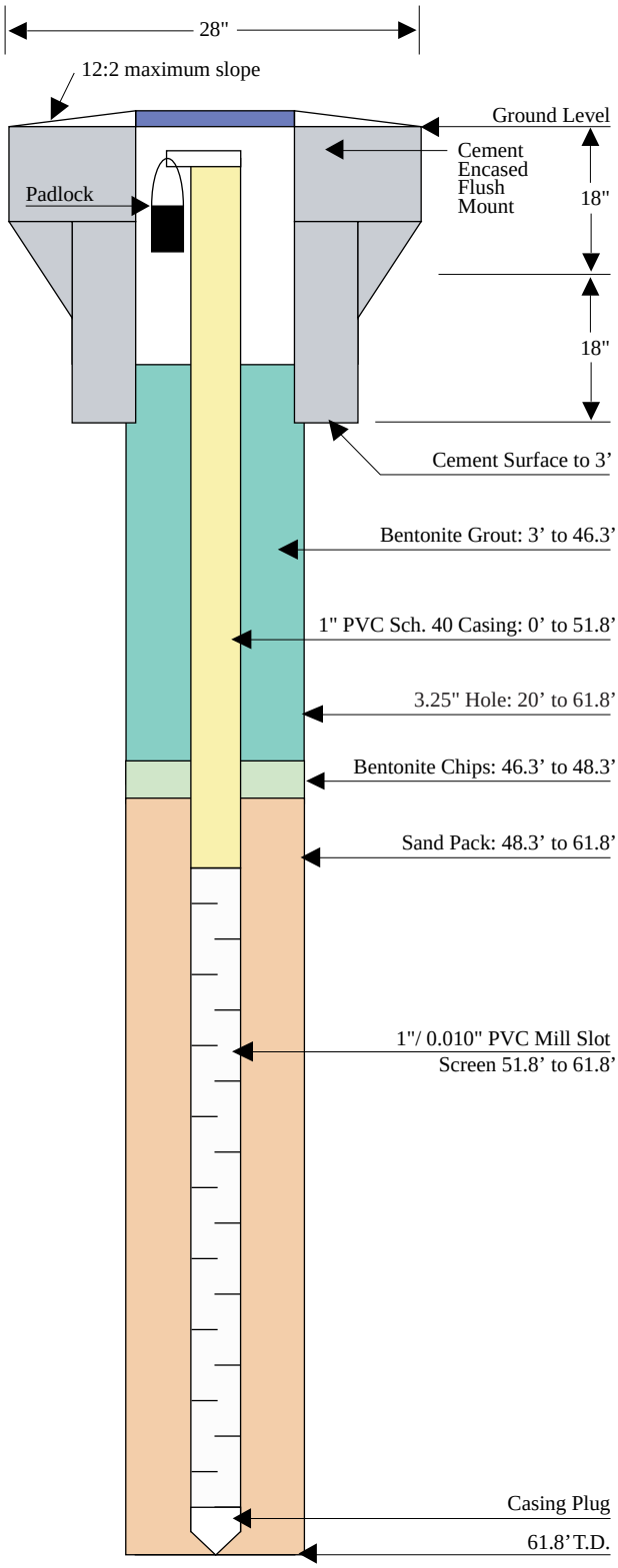
1" PVC Schedule 40 threaded casing and a Mill Slot (0.010") well screen were installed.

HOLE SIZE
The hole is 4.25" in diameter from the surface to 20’ below ground level and grouted from the top of the sand pack to the base of the flush mount.

GRAVEL / SAND PACK
Gravel/sand pack is a 1-/20 sand, from the bottom of the hole 2’ above the top of the screen.

CONTRACTOR LICENSING
The well was constructed under the direction of a licensed water well contractor as specified under the Kansas Department of Health and Environment regulation.

REGISTRATION
The well is registered with the Kansas Department of Health and Environment on form WWC-5 provided by that department.



(NOT TO SCALE)

WATER WELL RECORD **Form WWC-5** Division of Water Resources; App. No.

1 LOCATION OF WATER WELL: County: **Brown** Fraction: **NW** ¼ **NE** ¼ **SW** ¼ | Section Number: **28** | Township Number: T **3** S | Range Number: R **16** E

Distance and direction from nearest town or city street address of well if located within city?

Global Positioning System (decimal degrees, min. of 4 digits)
Latitude: N °
Longitude: W °
Datum: above mean level **1207.611**
Data Collection Method: **legal survey**

2 WATER WELL OWNER: **USDA/CCC**
RR#, St. Address, Box # : Stop 0513-RM 4725, 1400 Independence Ave. SW
City, State, ZIP Code : Washington DC, 20250

3 LOCATE WELL'S LOCATON WITH AN "X" IN SECTION BOX:

N / NW / NE / W / X / E / SW / SE / S

4 DEPTH OF COMPLETED WELL **61.8** ft.
MW13
Depth(s) Groundwater Encountered 1 _____ ft. 2 _____ ft. 3 _____ ft.
WELL'S STATIC WATER LEVEL _____ ft. below land surface measured on mo/day/yr _____
Pump test data: Well water was _____ ft. after _____ hours pumping _____ gpm
Est. Yield _____ gpm: Well water was _____ ft. after _____ hours pumping _____ gpm
WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well
1 Domestic 3 Feed lot 6 Oil field water supply 9 Dewatering 12 Other (Specify below)
2 Irrigation 4 Industrial 7 Domestic (lawn & garden) (10) Monitoring well
Was a chemical/bacteriological sample submitted to Department? Yes ____ No **X** ; If yes, mo/day/yrs
Sample was submitted _____ Water Well Disinfected? Yes ____ No **X**

5 TYPE OF CASING USED: 5 Wrought Iron 8 Concrete tile CASING JOINTS: Glued ____ Clamped ____
1 Steel 3 RMP (SR) 6 Asbestos-Cement 9 Other (specify below) Welded _____
(2) PVC 4 ABS 7 Fiberglass _____ Threaded **X**
Blank casing diameter **1** in. to **51.8** ft., Dia _____ in. to _____ ft., Dia _____ in. to _____ ft.
Casing height below land surface **0.00** ft., Weight _____ lbs./ft. Wall thickness or gauge No. _____
TYPE OF SCREEN OR PERFORATION MATERIAL:
1 Steel 3 Stainless steel 5 Fiberglass (7) PVC 9 ABS 11 Other (specify) _____
2 Brass 4 Galvanized steel 6 Concrete tile 8 RM (SR) 10 Asbestos-Cement 12 None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE:
1 Continuous slot (3) Mill slot 5 Guaze wrapped 7 Torch cut 9 Drilled holes 11 None (open hole)
2 Louvered shutter 4 Key punched 6 Wire wrapped 8 Saw Cut 10 Other (specify) _____
SCREEN-PERFORATED INTERVALS: From **51.8** ft. to **61.8** ft. From _____ ft. to _____ ft.
GRAVEL PACK INTERVALS: From **48.3** ft. to **61.8** ft. From _____ ft. to _____ ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout (3) Bent. Grout (4) Other Bentonite Chips
Grout Intervals From **3** ft. to **46.3** ft. From **46.3** ft. to **48.3** ft. From _____ ft. to _____ ft.
What is the nearest source of possible contamination:
1 Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 13 Insecticide Storage 16 Other (specify below) **Former Grain Storage Bins**
2 Sewer lines 5 Cess pool 8 Sewage lagoon 11 Fuel storage 14 Abandoned water well
3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage 15 Oil well/ gas well
Direction from well? _____ How many feet? _____

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	2	**SILTY CLAY with Road Gravel**	12	20	**SILTY CLAY, very stiff, highly oxidized, iron nodules, fine noncalcareous white grains, moist, gray brown to brown**
2	4	**SILTY CLAY, moist, noncalcareous, black**	20	56	**SILTY CLAY, very stiff, some iron staining, black streaks, noncalcareous matrix, calcareous white nodules at 29.2 ft and 32.5 ft., 50-51.5 ft, and 54.25-54.25 ft, moist, light gray brown to brown**
4	12	**SILTY CLAY, very silty, iron banding and staining, iron nodules, black streaks, moist, noncalcareous, gray brown to dark gray brown**			**Flushmount waiver from Don Taylor, BOW**

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/year) **08/25/07** and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. **757** . This Water Well Record was completed on (mo/day/year) **09/24/07** under the business name of **Larsen & Associates, Inc.** by (signature) _____ .

KSA 82a-1212

Form provided by Forms-On-A-Disk, Inc. · Dallas, Texas · (214) 340-9429

Monitor Well MW-14: Powhattan, KS

SW 1/4 of NE 1/4 of SW 1/4 of Section 28, Twp. 3 South, Rge. 16 East
Brown County, State of Kansas
Elevation: 1203.084’

Date: 08/25/07

WELL HEAD PROTECTION
12" Morrison Brothers, Co. Model 418XA flush mount cover. Top of casing is fitted with a (J-Plug) Morrison Brothers, Co. Model 678XA and padlock.

CONCRETE PAD
Minimum of 8" thick and extends at least 8" larger than the flush mount (28" minimum). Sloped at top to prevent pooling of water, vegetation around well, and allows for placement of a surveyor pin.

IMPERVIOUS GROUT
The well is grouted with impervious bentonite grout and tremied in the hole as required, mixed with clean fresh water to have a minimum density of 9.4 lbs. per gallon.

WELL CASING
Well casing is terminated as high as possible inside the flush mount and is capped with a (J-Plug) Morrison Brothers, Co. Model 678XA locking plug and padlock.

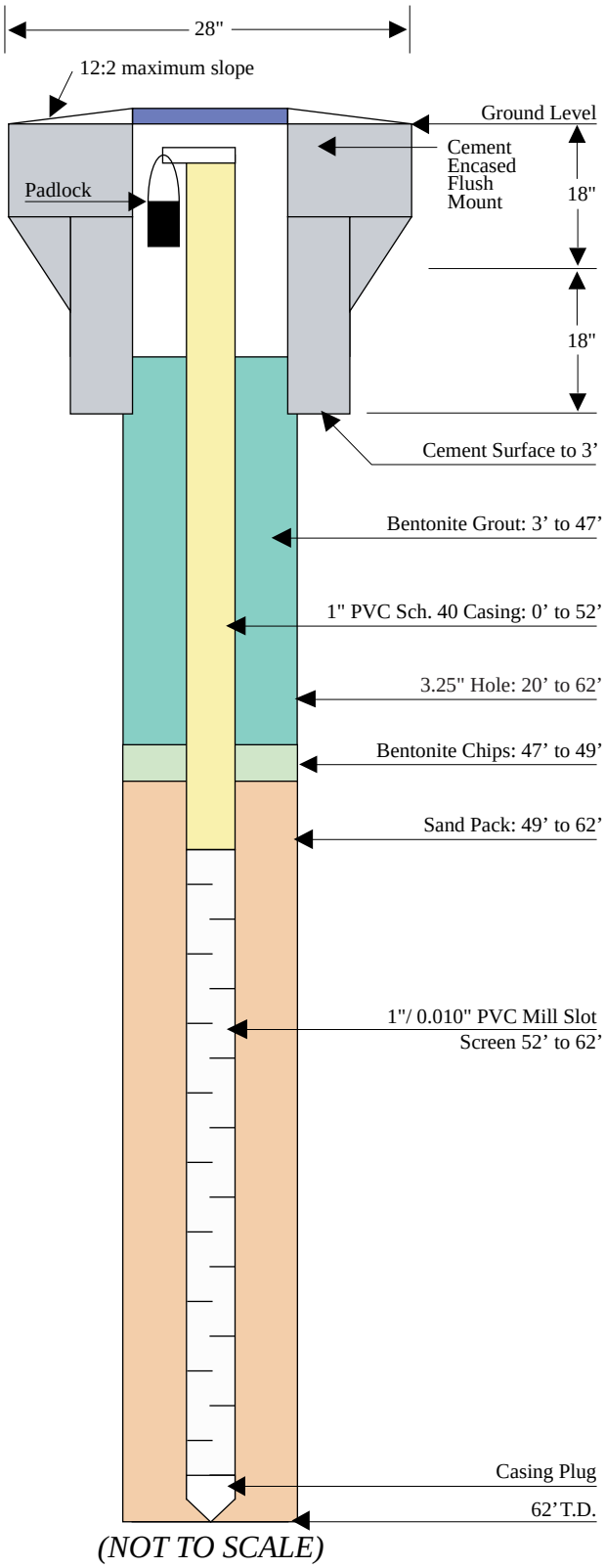
1" PVC Schedule 40 threaded casing and a Mill Slot (0.010") well screen were installed.

HOLE SIZE
The hole is 4.25" in diameter from the surface to 20’ below ground level and grouted from the top of the sand pack to the base of the flush mount.

GRAVEL / SAND PACK
Gravel/sand pack is a 1-/20 sand, from the bottom of the hole 2’ above the top of the screen.

CONTRACTOR LICENSING
The well was constructed under the direction of a licensed water well contractor as specified under the Kansas Department of Health and Environment regulation.

REGISTRATION
The well is registered with the Kansas Department of Health and Environment on form WWC-5 provided by that department.



(NOT TO SCALE)

WATER WELL RECORD **Form WWC-5** Division of Water Resources; App. No.

1 LOCATION OF WATER WELL: County: **Brown** | Fraction: **SW ¼ NE ¼ SW ¼** | Section Number: **28** | Township Number: T **3** S | Range Number: R **16** E

Distance and direction from nearest town or city street address of well if located within city?

Global Positioning System (decimal degrees, min. of 4 digits)
Latitude: N °
Longitude: W °
Datum: above mean sea level
1203.084
Data Collection Method: **legal survey**

2 WATER WELL OWNER: **USDA/CCC**
RR#, St. Address, Box # : Stop 0513-RM 4725, 1400 Independence Ave. SW
City, State, ZIP Code : Washington DC, 20250

3 LOCATE WELL'S LOCATON WITH AN "X" IN SECTION BOX:

N / W / E / S; NW, NE, X, SW, SE

4 DEPTH OF COMPLETED WELL **62** ft.
MW14
Depth(s) Groundwater Encountered 1 _____ ft. 2 _____ ft. 3 _____ ft.
WELL'S STATIC WATER LEVEL _____ ft. below land surface measured on mo/day/yr _____
Pump test data: Well water was _____ ft. after _____ hours pumping _____ gpm
Est. Yield _____ gpm: Well water was _____ ft. after _____ hours pumping _____ gpm
WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well
1 Domestic 3 Feed lot 6 Oil field water supply 9 Dewatering 12 Other (Specify below)
2 Irrigation 4 Industrial 7 Domestic (lawn & garden) (10) Monitoring well _____
Was a chemical/bacteriological sample submitted to Department? Yes ____ No **X** ; If yes, mo/day/yrs
Sample was submitted _____ Water Well Disinfected? Yes ____ No **X**

5 TYPE OF CASING USED: 5 Wrought Iron 8 Concrete tile CASING JOINTS: Glued ____ Clamped ____
1 Steel 3 RMP (SR) 6 Asbestos-Cement 9 Other (specify below) Welded ____
(2) PVC 4 ABS 7 Fiberglass _____ Threaded **X**
Blank casing diameter **1** in. to **52** ft., Dia _____ in. to _____ ft., Dia _____ in. to _____ ft.
Casing height below land surface **0.00** ft., Weight _____ lbs./ft. Wall thickness or gauge No. _____
TYPE OF SCREEN OR PERFORATION MATERIAL:
1 Steel 3 Stainless steel 5 Fiberglass (7) PVC 9 ABS 11 Other (specify) _____
2 Brass 4 Galvanized steel 6 Concrete tile 8 RM (SR) 10 Asbestos-Cement 12 None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE:
1 Continuous slot (3) Mill slot 5 Guaze wrapped 7 Torch cut 9 Drilled holes 11 None (open hole)
2 Louvered shutter 4 Key punched 6 Wire wrapped 8 Saw Cut 10 Other (specify) _____

SCREEN-PERFORATED INTERVALS:	From	**52** ft. to **62** ft.	From ____ ft. to ____ ft.				
	From	____ ft. to ____ ft.	From ____ ft. to ____ ft.				
GRAVEL PACK INTERVALS:	From	**49** ft. to **62** ft.	From ____ ft. to ____ ft.				
	From	____ ft. to ____ ft.	From ____ ft. to ____ ft.				

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout (3) Bent. Grout (4) Other Bentonite Chips
Grout Intervals From **3** ft. to **47** ft. From **47** ft. to **49** ft. From ____ ft. to ____ ft.
What is the nearest source of possible contamination:
1 Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 13 Insecticide Storage 16 Other (specify below) **Former Grain Storage Bins**
2 Sewer lines 5 Cess pool 8 Sewage lagoon 11 Fuel storage 14 Abandoned water well
3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage 15 Oil well/ gas well
Direction from well? _____ How many feet? _____

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	**62**	**SILTY CLAY, iron staining, black streaks, gray brown to brown, moist**			
					Flushmount waiver from Don Taylor, BOW

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/year) **8/25/07** and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. **757** . This Water Well Record was completed on (mo/day/year) **9/24/07** under the business name of **Larsen & Associates, Inc.** by (signature) _____.

INSTRUCTIONS: Please fill in blanks or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one to WATER WELL OWNER and retain one for your records. Fee of $5.00 for each constructed well. Visit us at http://www.kdheks.gov/waterwell.

KSA 82a-1212

Form provided by Forms-On-A-Disk, Inc. · Dallas, Texas · (214) 340-9429

Monitor Well MW-15: Powhattan, KS

NE 1/4 of NW 1/4 of SW 1/4 of Section 28, Twp. 3 South, Rge. 16 East
Brown County, State of Kansas
Elevation: 1208.781’

Date: 08/25/07

WELL HEAD PROTECTION
12" Morrison Brothers, Co. Model 418XA flush mount cover. Top of casing is fitted with a (J-Plug) Morrison Brothers, Co. Model 678XA and padlock.

CONCRETE PAD
Minimum of 8" thick and extends at least 8" larger than the flush mount (28" minimum). Sloped at top to prevent pooling of water, vegetation around well, and allows for placement of a surveyor pin.

IMPERVIOUS GROUT
The well is grouted with impervious bentonite grout and tremied in the hole as required, mixed with clean fresh water to have a minimum density of 9.4 lbs. per gallon.

WELL CASING
Well casing is terminated as high as possible inside the flush mount and is capped with a (J-Plug) Morrison Brothers, Co. Model 678XA locking plug and padlock.

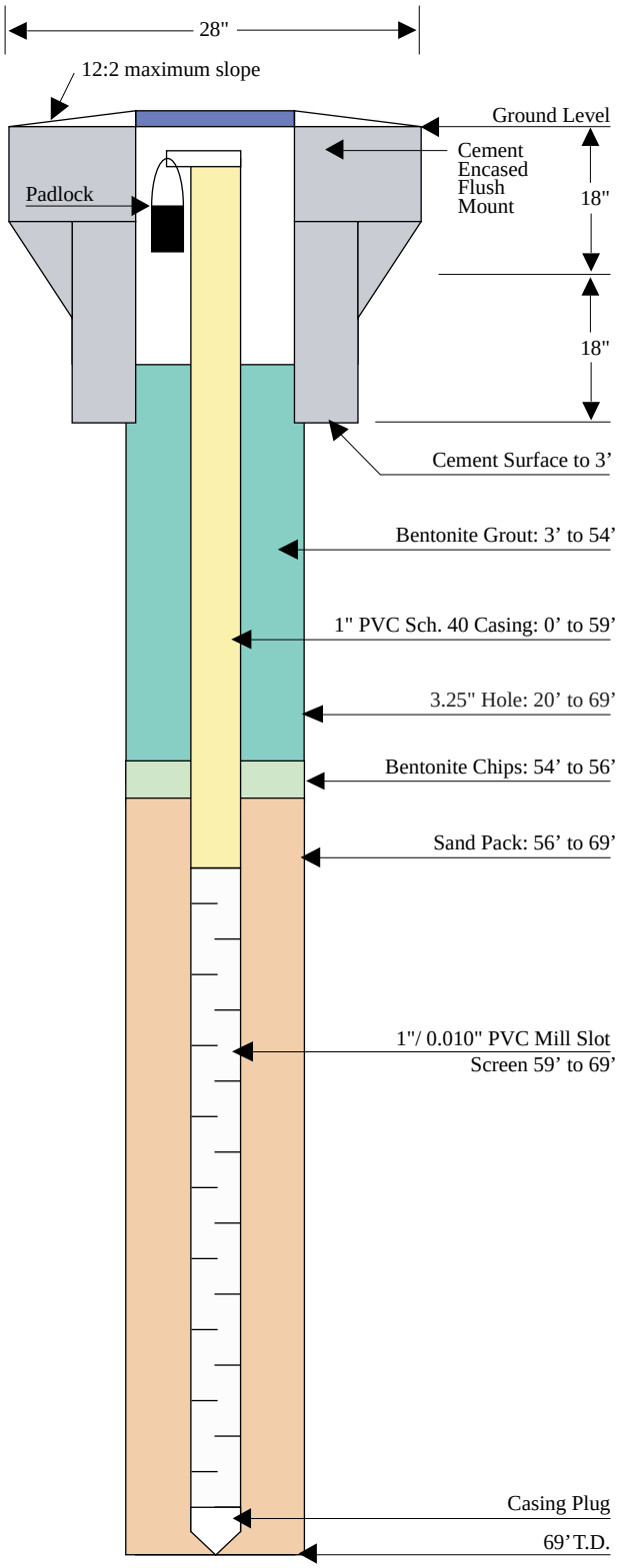
1" PVC Schedule 40 threaded casing and a Mill Slot (0.010") well screen were installed.

HOLE SIZE
The hole is 4.25" in diameter from the surface to 20’ below ground level and grouted from the top of the sand pack to the base of the flush mount.

GRAVEL / SAND PACK
Gravel/sand pack is a 1-/20 sand, from the bottom of the hole 2’ above the top of the screen.

CONTRACTOR LICENSING
The well was constructed under the direction of a licensed water well contractor as specified under the Kansas Department of Health and Environment regulation.

REGISTRATION
The well is registered with the Kansas Department of Health and Environment on form WWC-5 provided by that department.



(NOT TO SCALE)

WATER WELL RECORD **Form WWC-5** Division of Water Resources; App. No.

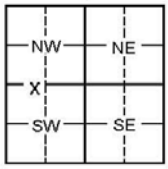
1 LOCATION OF WATER WELL: Fraction: NE ¼ NW ¼ SW ¼ | Section Number: 28 | Township Number: T 3 S | Range Number: R 16 E
County: **Brown**

Distance and direction from nearest town or city street address of well if located within city?

Global Positioning System (decimal degrees, min. of 4 digits)
Latitude: N °
Longitude: W °
Datum: above mean sea level
1208.781
Data Collection Method: **legal survey**

2 WATER WELL OWNER: **USDA/CCC**
RR#, St. Address, Box # : Stop 0513-RM 4725, 1400 Independence Ave. SW
City, State, ZIP Code : Washington DC, 20250

3 LOCATE WELL'S LOCATON WITH AN "X" IN SECTION BOX:



4 DEPTH OF COMPLETED WELL **69** ft.
MW15
Depth(s) Groundwater Encountered 1 _____ ft. 2 _____ ft. 3 _____ ft.
WELL'S STATIC WATER LEVEL _____ ft. below land surface measured on mo/day/yr _____
Pump test data: Well water was _____ ft. after _____ hours pumping _____ gpm
Est. Yield _____ gpm: Well water was _____ ft. after _____ hours pumping _____ gpm
WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well
1 Domestic 3 Feed lot 6 Oil field water supply 9 Dewatering 12 Other (Specify below)
2 Irrigation 4 Industrial 7 Domestic (lawn & garden) (10) Monitoring well _____
Was a chemical/bacteriological sample submitted to Department? Yes ____ No **X** ; If yes, mo/day/yrs
Sample was submitted _____ Water Well Disinfected? Yes ____ No **X**

5 TYPE OF CASING USED: 5 Wrought Iron 8 Concrete tile CASING JOINTS: Glued ____ Clamped ____
1 Steel 3 RMP (SR) 6 Asbestos-Cement 9 Other (specify below) Welded ____
(2) PVC 4 ABS 7 Fiberglass _____ Threaded **X**
Blank casing diameter **1** in. to **59** ft., Dia _____ in. to _____ ft., Dia _____ in. to _____ ft.
Casing height below land surface **0.00** ft., Weight _____ lbs./ft. Wall thickness or gauge No. _____
TYPE OF SCREEN OR PERFORATION MATERIAL:
1 Steel 3 Stainless steel 5 Fiberglass (7) PVC 9 ABS 11 Other (specify) _____
2 Brass 4 Galvanized steel 6 Concrete tile 8 RM (SR) 10 Asbestos-Cement 12 None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE:
1 Continuous slot (3) Mill slot 5 Guaze wrapped 7 Torch cut 9 Drilled holes 11 None (open hole)
2 Louvered shutter 4 Key punched 6 Wire wrapped 8 Saw Cut 10 Other (specify) _____
SCREEN-PERFORATED INTERVALS: From **59** ft. to **69** ft. From _____ ft. to _____ ft.
From _____ ft. to _____ ft. From _____ ft. to _____ ft.
GRAVEL PACK INTERVALS: From **56** ft. to **69** ft. From _____ ft. to _____ ft.
From _____ ft. to _____ ft. From _____ ft. to _____ ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout (3) Bent. Grout (4) Other Bentonite Chips
Grout Intervals From **3** ft. to **54** ft. From **54** ft. to **56** ft. From _____ ft. to _____ ft.
What is the nearest source of possible contamination:
1 Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 13 Insecticide Storage 16 Other (specify below) **Former Grain Storage Bins**
2 Sewer lines 5 Cess pool 8 Sewage lagoon 11 Fuel storage 14 Abandoned water well
3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage 15 Oil well/ gas well
Direction from well? _____ How many feet? _____

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	**69**	**SILTY CLAY, iron staining, black streaks, gray brown to gray, moist**			
					Flushmount waiver from Don Taylor, BOW

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/year) **8/25/07** and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. **757** . This Water Well Record was completed on (mo/day/year) **9/24/07** under the business name of **Larsen & Associates, Inc.** by (signature) _____.

INSTRUCTIONS: Please fill in blanks or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one to WATER WELL OWNER and retain one for your records. Fee of $5.00 for each constructed well. Visit us at http://www.kdheks.gov/waterwell.

KSA 82a-1212

Form provided by Forms-On-A-Disk, Inc. · Dallas, Texas · (214) 340-9429

Monitor Well MW-16: Powhattan, KS

SW 1/4 of NE 1/4 of NW 1/4 of Section 28, Twp. 3 South, Rge. 16 East
Brown County, State of Kansas
Elevation: 1207.311’

Date: 08/25/07

WELL HEAD PROTECTION
12" Morrison Brothers, Co. Model 418XA flush mount cover. Top of casing is fitted with a (J-Plug) Morrison Brothers, Co. Model 678XA and padlock.

CONCRETE PAD
Minimum of 8" thick and extends at least 8" larger than the flush mount (28" minimum). Sloped at top to prevent pooling of water, vegetation around well, and allows for placement of a surveyor pin.

IMPERVIOUS GROUT
The well is grouted with impervious bentonite grout and tremied in the hole as required, mixed with clean fresh water to have a minimum density of 9.4 lbs. per gallon.

WELL CASING
Well casing is terminated as high as possible inside the flush mount and is capped with a (J-Plug) Morrison Brothers, Co. Model 678XA locking plug and padlock.

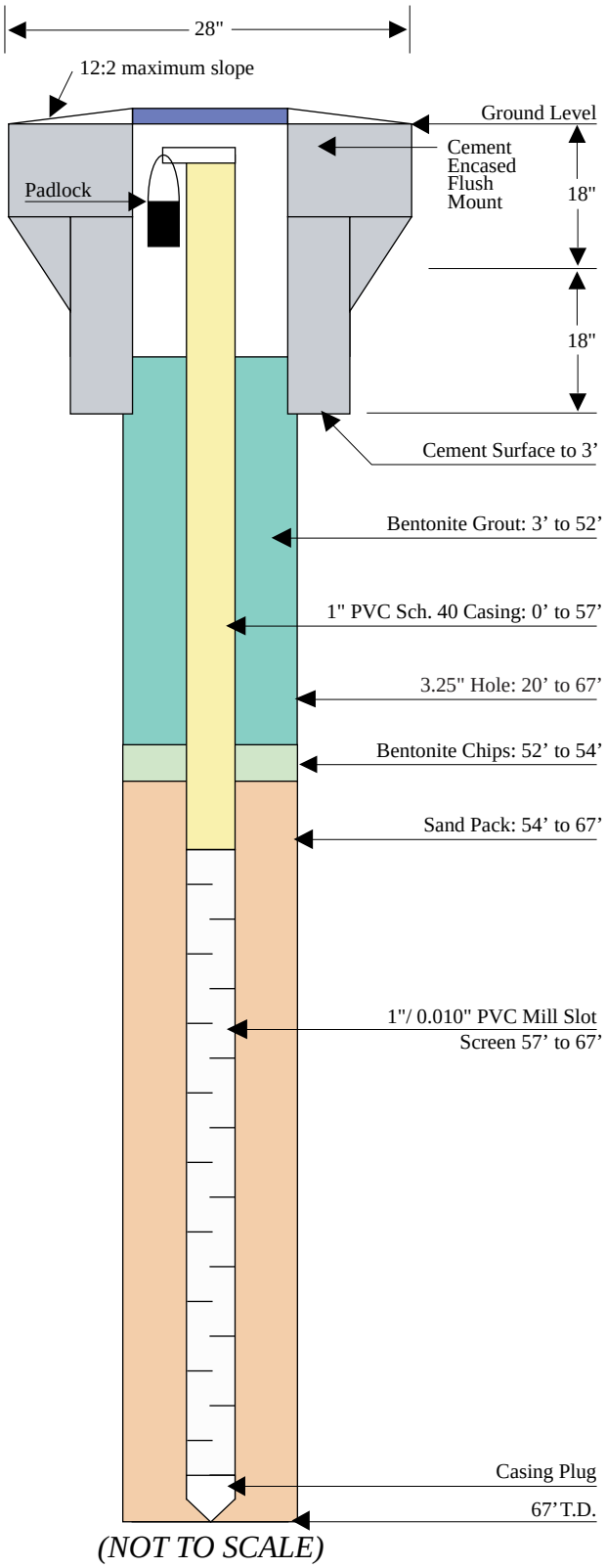
1" PVC Schedule 40 threaded casing and a Mill Slot (0.010") well screen were installed.

HOLE SIZE
The hole is 4.25" in diameter from the surface to 20’ below ground level and grouted from the top of the sand pack to the base of the flush mount.

GRAVEL / SAND PACK
Gravel/sand pack is a 1-/20 sand, from the bottom of the hole 2’ above the top of the screen.

CONTRACTOR LICENSING
The well was constructed under the direction of a licensed water well contractor as specified under the Kansas Department of Health and Environment regulation.

REGISTRATION
The well is registered with the Kansas Department of Health and Environment on form WWC-5 provided by that department.



(NOT TO SCALE)

WATER WELL RECORD **Form WWC-5** Division of Water Resources; App. No.

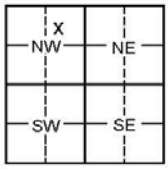
1 LOCATION OF WATER WELL: County: **Brown** Fraction: **SW** ¼ **NE** ¼ **NW** ¼ | Section Number: **28** | Township Number: T **3** S | Range Number: R **16** E

Distance and direction from nearest town or city street address of well if located within city?

Global Positioning System (decimal degrees, min. of 4 digits)
Latitude: N °
Longitude: W °
Datum: above mean sea level **1207.311**
Data Collection Method: **legal survey**

2 WATER WELL OWNER: **USDA/CCC**
RR#, St. Address, Box # : Stop 0513-RM 4725, 1400 Independence Ave. SW
City, State, ZIP Code : Washington DC, 20250

3 LOCATE WELL'S LOCATON WITH AN "X" IN SECTION BOX:



4 DEPTH OF COMPLETED WELL **67** **ft.**
MW16
Depth(s) Groundwater Encountered 1 ____ ft. 2 ____ ft. 3 ____ ft.
WELL'S STATIC WATER LEVEL ____ ft. below land surface measured on mo/day/yr ____
Pump test data: Well water was ____ ft. after ____ hours pumping ____ gpm
Est. Yield ____ gpm: Well water was ____ ft. after ____ hours pumping ____ gpm
WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well
1 Domestic 3 Feed lot 6 Oil field water supply 9 Dewatering 12 Other (Specify below)
2 Irrigation 4 Industrial 7 Domestic (lawn & garden) (10) Monitoring well
Was a chemical/bacteriological sample submitted to Department? Yes ____ No **X** ; If yes, mo/day/yrs
Sample was submitted ____ Water Well Disinfected? Yes ____ No **X**

5 TYPE OF CASING USED: 5 Wrought Iron 8 Concrete tile CASING JOINTS: Glued ____ Clamped ____
1 Steel 3 RMP (SR) 6 Asbestos-Cement 9 Other (specify below) Welded ____
(2) PVC 4 ABS 7 Fiberglass Threaded **X**
Blank casing diameter **1** in. to **57** ft., Dia ____ in. to ____ ft., Dia ____ in. to ____ ft.
Casing height below land surface **0.00** ft., Weight ____ lbs./ft. Wall thickness or gauge No. ____
TYPE OF SCREEN OR PERFORATION MATERIAL:
1 Steel 3 Stainless steel 5 Fiberglass (7) PVC 9 ABS 11 Other (specify)
2 Brass 4 Galvanized steel 6 Concrete tile 8 RM (SR) 10 Asbestos-Cement 12 None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE:
1 Continuous slot (3) Mill slot 5 Guaze wrapped 7 Torch cut 9 Drilled holes 11 None (open hole)
2 Louvered shutter 4 Key punched 6 Wire wrapped 8 Saw Cut 10 Other (specify)

SCREEN-PERFORATED INTERVALS:	From	**57** ft. to **67** ft.	From ____ ft. to ____ ft.	From	____ ft. to ____ ft.	From ____ ft. to ____ ft.	
	From	____ ft. to ____ ft.	From ____ ft. to ____ ft.	From	____ ft. to ____ ft.	From ____ ft. to ____ ft.	
GRAVEL PACK INTERVALS:	From	**54** ft. to **67** ft.	From ____ ft. to ____ ft.	From	____ ft. to ____ ft.	From ____ ft. to ____ ft.	
	From	____ ft. to ____ ft.	From ____ ft. to ____ ft.	From	____ ft. to ____ ft.	From ____ ft. to ____ ft.	

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout (3) Bent. Grout (4) Other Bentonite Chips
Grout Intervals From **3** ft. to **52** ft. From **52** ft. to **54** ft. From ____ ft. to ____ ft.
What is the nearest source of possible contamination:
1 Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 13 Insecticide Storage 16 Other (specify below) **Former Grain Storage Bins**
2 Sewer lines 5 Cess pool 8 Sewage lagoon 11 Fuel storage 14 Abandoned water well
3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage 15 Oil well/ gas well
Direction from well? ____ How many feet? ____

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	**67**	**SILTY CLAY, iron staining, black streaks, gray brown to brown, moist**			
					Flushmount waiver from Don Taylor, BOW

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/year) **8/25/07** and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. **757** . This Water Well Record was completed on (mo/day/year) **9/24/07** under the business name of **Larsen & Associates, Inc.** by (signature) ____.

INSTRUCTIONS: Please fill in blanks or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one to WATER WELL OWNER and retain one for your records. Fee of $5.00 for each constructed well. Visit us at http://www.kdheks.gov/waterwell.

KSA 82a-1212

Monitor Well MW-17: Powhattan, KS

NW 1/4 of NE 1/4 of SW 1/4 of Section 28, Twp. 3 South, Rge. 16 East
Brown County, State of Kansas
Elevation: 1207.546’

Date: 08/25/07

WELL HEAD PROTECTION
12" Morrison Brothers, Co. Model 418XA flush mount cover. Top of casing is fitted with a (J-Plug) Morrison Brothers, Co. Model 678XA and padlock.

CONCRETE PAD
Minimum of 8" thick and extends at least 8" larger than the flush mount (28" minimum). Sloped at top to prevent pooling of water, vegetation around well, and allows for placement of a surveyor pin.

IMPERVIOUS GROUT
The well is grouted with impervious bentonite grout and tremied in the hole as required, mixed with clean fresh water to have a minimum density of 9.4 lbs. per gallon.

WELL CASING
Well casing is terminated as high as possible inside the flush mount and is capped with a (J-Plug) Morrison Brothers, Co. Model 678XA locking plug and padlock.

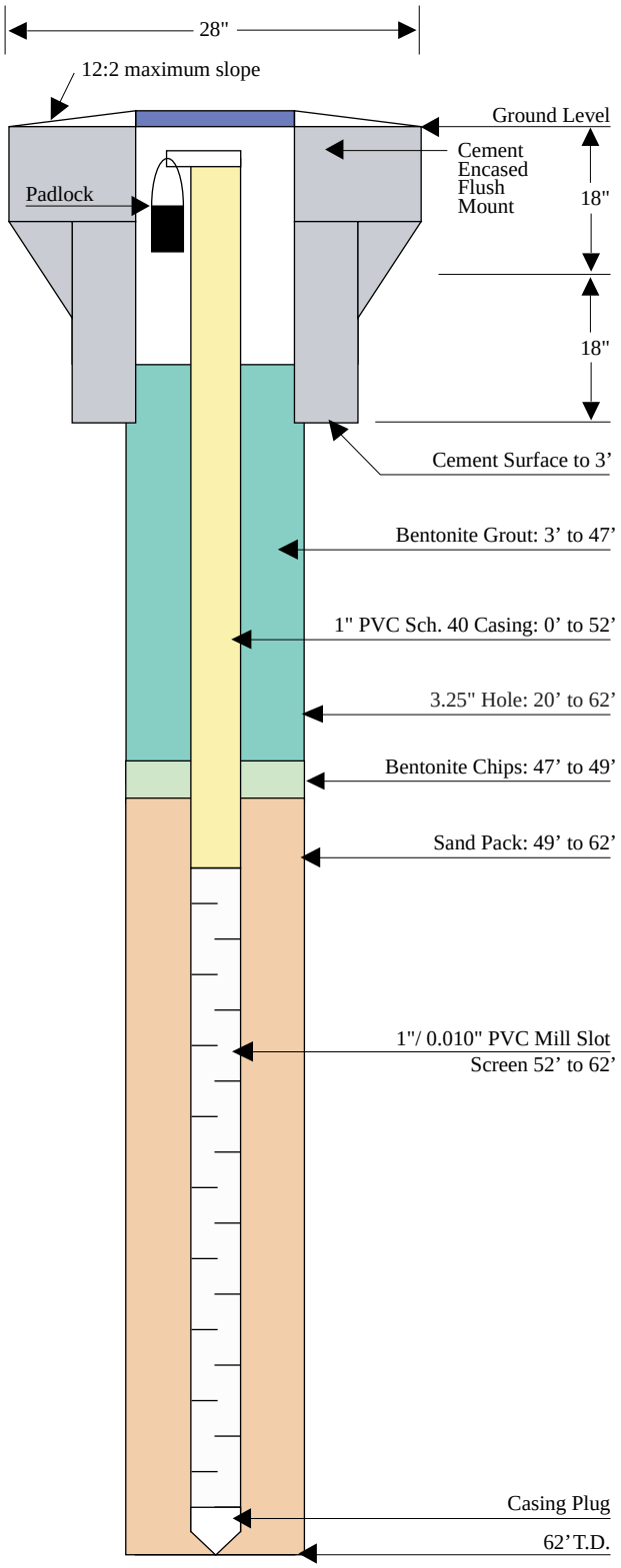
1" PVC Schedule 40 threaded casing and a Mill Slot (0.010") well screen were installed.

HOLE SIZE
The hole is 4.25" in diameter from the surface to 20’ below ground level and grouted from the top of the sand pack to the base of the flush mount.

GRAVEL / SAND PACK
Gravel/sand pack is a 1-/20 sand, from the bottom of the hole 2’ above the top of the screen.

CONTRACTOR LICENSING
The well was constructed under the direction of a licensed water well contractor as specified under the Kansas Department of Health and Environment regulation.

REGISTRATION
The well is registered with the Kansas Department of Health and Environment on form WWC-5 provided by that department.



(NOT TO SCALE)

WATER WELL RECORD **Form WWC-5** Division of Water Resources; App. No.

1 LOCATION OF WATER WELL: County: **Brown** Fraction: NW ¼ NE ¼ SW ¼ | Section Number: **28** | Township Number: T **3** S | Range Number: R **16** E

Distance and direction from nearest town or city street address of well if located within city?

Global Positioning System (decimal degrees, min. of 4 digits)
Latitude: N °
Longitude: W °
Datum: above mean sea level **1207.546**
Data Collection Method: **legal survey**

2 WATER WELL OWNER: **USDA/CCC**
RR#, St. Address, Box # : Stop 0513-RM 4725, 1400 Independence Ave. SW
City, State, ZIP Code : Washington DC, 20250

3 LOCATE WELL'S LOCATON WITH AN "X" IN SECTION BOX:

N / NW / NE / W / X / E / SW / SE / S

4 DEPTH OF COMPLETED WELL **62** ft.
MW17
Depth(s) Groundwater Encountered 1 ____ ft. 2 ____ ft. 3 ____ ft.
WELL'S STATIC WATER LEVEL ____ ft. below land surface measured on mo/day/yr ____
Pump test data: Well water was ____ ft. after ____ hours pumping ____ gpm
Est. Yield ____ gpm: Well water was ____ ft. after ____ hours pumping ____ gpm
WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well
1 Domestic 3 Feed lot 6 Oil field water supply 9 Dewatering 12 Other (Specify below)
2 Irrigation 4 Industrial 7 Domestic (lawn & garden) (10) Monitoring well ____
Was a chemical/bacteriological sample submitted to Department? Yes ____ No **X** ; If yes, mo/day/yrs
Sample was submitted ____ Water Well Disinfected? Yes ____ No **X**

5 TYPE OF CASING USED: 5 Wrought Iron 8 Concrete tile CASING JOINTS: Glued ____ Clamped ____
1 Steel 3 RMP (SR) 6 Asbestos-Cement 9 Other (specify below) Welded ____
(2) PVC 4 ABS 7 Fiberglass ____ Threaded **X**
Blank casing diameter **1** in. to **52** ft., Dia ____ in. to ____ ft., Dia ____ in. to ____ ft.
Casing height below land surface **0.00** ft., Weight ____ lbs./ft. Wall thickness or gauge No. ____
TYPE OF SCREEN OR PERFORATION MATERIAL:
1 Steel 3 Stainless steel 5 Fiberglass (7) PVC 9 ABS 11 Other (specify) ____
2 Brass 4 Galvanized steel 6 Concrete tile 8 RM (SR) 10 Asbestos-Cement 12 None used (open hole)
SCREEN OR PERFORATION OPENINGS ARE:
1 Continuous slot (3) Mill slot 5 Guaze wrapped 7 Torch cut 9 Drilled holes 11 None (open hole)
2 Louvered shutter 4 Key punched 6 Wire wrapped 8 Saw Cut 10 Other (specify) ____
SCREEN-PERFORATED INTERVALS: From **52** ft. to **62** ft. From ____ ft. to ____ ft.
GRAVEL PACK INTERVALS: From **49** ft. to **62** ft. From ____ ft. to ____ ft.

6 GROUT MATERIAL: 1 Neat cement 2 Cement grout (3) Bent. Grout (4) Other Bentonite Chips
Grout Intervals From **3** ft. to **47** ft. From **47** ft. to **49** ft. From ____ ft. to ____ ft.
What is the nearest source of possible contamination:
1 Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 13 Insecticide Storage 16 Other (specify below) **Former Grain Storage Bins**
2 Sewer lines 5 Cess pool 8 Sewage lagoon 11 Fuel storage 14 Abandoned water well
3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage 15 Oil well/ gas well
Direction from well? ____ How many feet? ____

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
0	1.5	**SILTY CLAY intermixed with road gravel**	48	56	**SILTY CLAY, iron staining, iron nodules, trace sandy clay, white carbonate nodules at 51.5 ft, light brown gray to gray**
1.5	8	**SILTY CLAY, very silty, iron staining, black streaks, black to 3 ft, light to dark gray brown to 8 ft**			
8	48	**SILTY CLAY, iron staining, moist, brown to gray brown, white carbonate nodules at 32.5 ft, 42 ft and 47 ft, moist**			
					Flushmount waiver from Don Taylor, BOW

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was (1) constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/year) **8/25/07** and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. **757** . This Water Well Record was completed on (mo/day/year) **9/24/07** under the business name of **Larsen & Associates, Inc.** by (signature) ____ .

INSTRUCTIONS: Please fill in blanks or circle the correct answers. Send top three copies to Kansas Department of Health and Environment, Bureau of Water, Geology Section, 1000 SW Jackson St., Suite 420, Topeka, Kansas 66612-1367. Telephone 785-296-5522. Send one to WATER WELL OWNER and retain one for your records. Fee of $5.00 for each constructed well. Visit us at http://www.kdheks.gov/waterwell.

KSA 82a-1212

Appendix C:

Field Documentation for the 2007 Investigation at Powhattan

TABLE C.1 Documentation of sample collection during the 2007 investigation at Powhattan, Kansas.

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/9/07	11:25	MW8	PHMW8-W-24066	Water	MW	55-65	2247	7/10/07	2; 5	Depth to water from TOC = 12.90 ft. Depth of well = 65.00 ft. Casing is 4-in. polyvinyl chloride (PVC). Sample collected at low flow after purging of 101 gal with a Redi-Flo pump.
7/9/07	13:23	KDHEP-1	PHKDHEP1-W-24065	Water	MW	55.1-65.1	2247	7/10/07	2; 9	Depth to water from TOC = 10.92 ft. Depth of well = 65.90 ft. Casing is 2-in. PVC. Sample collected at low flow after purging of 27 gal with a Redi-Flo pump.
7/9/07	14:08	TI01	PHTI01-W-24060	Water	CPT	59.5-64.5	2247	7/10/07	1; 5	Northeast corner of former CCC/USDA property, adjacent to monitoring well KDHEP1. Immediate water from 52.5 ft BGL, rising to 46 ft BGL within 2 min. Water turbid, light brown.
7/9/07	15:51	MW9	PHMW9-W-24067	Water	MW	52-62	2247	7/10/07	2; 13	Depth to water from TOC = 6.50 ft. Depth of well = 65.51 ft. Casing is 4-in. PVC. Sample collected at low flow after purging of 115 gal with a Redi-Flo pump.
7/9/07	16:17	TI02	PHTI02-W-24061	Water	CPT	58.75-63.75	2247	7/10/07	1; 9	Northeast corner of existing concrete apron, north side of co-op grain storage building (CGSB), north side of former CCC/USDA property. Immediate water from 56 ft BGL, rising to 40 ft BGL within 1 min. Water light brown, only slightly turbid.
7/9/07	16:35	QC	PHQCBR-W-24062[b]	Water	RI	–	2247	7/10/07	1; 17	Rinsate of decontaminated sampling bailer after collection of sample PHTI02-W-24061.
7/9/07	17:45	MW10	PHMW10-W-24064	Water	MW	56-66	2247	7/10/07	2; 17	Depth to water from TOC = 10.15 ft. Depth of well = 69.58 ft. Casing is 4-in. PVC. Sample collected at low flow after purging of 115 gal with a Redi-Flo pump.
7/9/07	18:25	TI03	PHTI03-W-24063	Water	CPT	60.75-65.75	2247	7/10/07	1; 13	Northwest corner of former CCC/USDA property at intersection of Front and Main. Initial water level approximately 48 ft, rising fast. Water turbid, light brown.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/10/07	9:05	TI01	PHTI01-S-24070	Soil	CPT	2	2243	7/10/07	1; 20	Vertical-profile soil sampling. Northeast corner of former CCC/USDA property, adjacent to south side of well KDHEP1.
7/10/07	9:39	TI01	PHTI01-S-24071	Soil	CPT	6	2243	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	9:50	TI01	PHTI01-S-24072	Soil	CPT	10	2243	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	10:02	TI01	PHTI01-S-24073	Soil	CPT	14	2243	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	10:14	TI01	PHTI01-S-24074	Soil	CPT	18	2243	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	10:28	TI01	PHTI01-S-24075	Soil	CPT	22	2243	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	10:29	TI01	PHTI01-S-24076[b]	Soil	CPT	22	2243	7/10/07	1; 20	Replicate of sample PHTI01-S-24075.
7/10/07	10:43	TI01	PHTI01-S-24077	Soil	CPT	24.75	2243	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	10:47	TI01	PHTI01-S-24078	Soil	CPT	27	2243	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	11:04	TI01	PHTI01-S-24079	Soil	CPT	30.5	2243	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	11:22	TI01	PHTI01-S-24080	Soil	CPT	34	2243	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	11:41	TI01	PHTI01-S-24081	Soil	CPT	38	2243	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	13:33	TI01	PHTI01-S-24082	Soil	CPT	42	2243	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	13:54	TI01	PHTI01-S-24083	Soil	CPT	45.5	2243	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	13:55	TI01	PHTI01-S-24084	Soil	CPT	46.75	2243	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	14:17	TI01	PHTI01-S-24085	Soil	CPT	50	2248	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	14:41	TI01	PHTI01-S-24086	Soil	CPT	53	2248	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	14:42	TI01	PHTI01-S-24087	Soil	CPT	55	2248	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	16:16	TI01	PHTI01-S-24088	Soil	CPT	58	2248	7/10/07	1; 20	Vertical-profile soil sampling at TI01.
7/10/07	16:30	QC	PHQCTB-S-24091[b]	Soil	TB	–	2248	7/10/07	1; 20	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on chain-of-custody forms (COCs) 2243 and 2248.
7/10/07	18:00	QC	PHQCTB-W-24089[b]	Water	TB	–	2247	7/10/07	1; 25	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COC 2247.
7/11/07	8:08	TI02	PHTI02-S-24092	Soil	CPT	2	2251	7/11/07	1; 28	Vertical-profile soil sampling. Former CCC/USDA property, northeast corner of concrete apron on north side of CGSB.
7/11/07	8:19	TI02	PHTI02-S-24093	Soil	CPT	6	2251	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	8:20	TI02	PHTI02-S-24094	Soil	CPT	7.5	2251	7/11/07	1; 28	Vertical-profile soil sampling at TI02.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/11/07	8:36	TI02	PHTI02-S-24095	Soil	CPT	10	2251	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	8:48	TI02	PHTI02-S-24096	Soil	CPT	14	2251	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	9:00	TI02	PHTI02-S-24097	Soil	CPT	18	2251	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	9:13	TI02	PHTI02-S-24098	Soil	CPT	22	2251	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	9:34	TI02	PHTI02-S-24099	Soil	CPT	26	2251	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	9:54	TI02	PHTI02-S-24100	Soil	CPT	30	2251	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	10:23	TI02	PHTI02-S-24101	Soil	CPT	34.5	2251	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	10:43	TI02	PHTI02-S-24102	Soil	CPT	38	2251	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	11:06	TI02	PHTI02-S-24103	Soil	CPT	42	2251	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	11:36	TI02	PHTI02-S-24104	Soil	CPT	46	2251	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	13:28	TI02	PHTI02-S-24105	Soil	CPT	50	2251	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	13:29	TI02	PHTI02-S-24106	Soil	CPT	51	2251	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	14:00	TI02	PHTI02-S-24107	Soil	CPT	54	2250	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	14:01	TI02	PHTI02-S-24108[b]	Soil	CPT	54	2250	7/11/07	1; 28	Replicate of sample PHTI02-S-24107.
7/11/07	14:30	TI02	PHTI02-S-24109	Soil	CPT	57.5	2250	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	14:31	TI02	PHTI02-S-24110	Soil	CPT	58.5	2250	7/11/07	1; 28	Vertical-profile soil sampling at TI02.
7/11/07	15:50	TI03	PHTI03-S-24111	Soil	CPT	2	2250	7/11/07	1; 32	Vertical-profile soil sampling. Northeast corner of former CCC/USDA property.
7/11/07	16:00	TI03	PHTI03-S-24112	Soil	CPT	6	2250	7/11/07	1; 32	Vertical-profile soil sampling at TI03.
7/11/07	16:12	TI03	PHTI03-S-24113	Soil	CPT	10	2250	7/11/07	1; 32	Vertical-profile soil sampling at TI03.
7/11/07	16:28	TI03	PHTI03-S-24114	Soil	CPT	14	2250	7/11/07	1; 32	Vertical-profile soil sampling at TI03.
7/11/07	16:43	TI03	PHTI03-S-24115	Soil	CPT	18	2250	7/11/07	1; 32	Vertical-profile soil sampling at TI03.
7/11/07	16:57	TI03	PHTI03-S-24116	Soil	CPT	22	2250	7/11/07	1; 32	Vertical-profile soil sampling at TI03.
7/11/07	16:59	QC	PHQCTB-S-24120[b]	Soil	TB	–	2250	7/11/07	1; 32	Trip blank sent the AGEM Laboratory for organic analyses with soil samples listed on COCs 2251 and 2250.
7/12/07	7:56	TI03	PHTI03-S-24117	Soil	CPT	26	2253	7/12/07	1; 32	Vertical-profile soil sampling at TI03.
7/12/07	8:11	TI03	PHTI03-S-24118	Soil	CPT	30	2253	7/12/07	1; 32	Vertical-profile soil sampling at TI03.
7/12/07	8:32	TI03	PHTI03-S-24119	Soil	CPT	34	2253	7/12/07	1; 32	Vertical-profile soil sampling at TI03.
7/12/07	9:00	TI03	PHTI03-S-24122	Soil	CPT	38	2253	7/12/07	1; 32	Vertical-profile soil sampling at TI03.
7/12/07	9:20	TI03	PHTI03-S-24123	Soil	CPT	41.25	2253	7/12/07	1; 32	Vertical-profile soil sampling at TI03.
7/12/07	9:21	TI03	PHTI03-S-24124	Soil	CPT	42.75	2253	7/12/07	1; 32	Vertical-profile soil sampling at TI03.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/12/07	9:47	TI03	PHTI03-S-24125	Soil	CPT	46	2253	7/12/07	1; 32	Vertical-profile soil sampling at TI03.
7/12/07	10:16	TI03	PHTI03-S-24126	Soil	CPT	50	2253	7/12/07	1; 32	Vertical-profile soil sampling at TI03.
7/12/07	10:48	TI03	PHTI03-S-24127	Soil	CPT	54	2253	7/12/07	1; 32	Vertical-profile soil sampling at TI03.
7/12/07	11:15	TI03	PHTI03-S-24128	Soil	CPT	58	2253	7/12/07	1; 32	Vertical-profile soil sampling at TI03.
7/12/07	15:04	TI04	PHTI04-W-24130	Water	CPT	60.4-65.4	2255	7/13/07	1; 37	Northwest boundary of former CCC/USDA property. Water rising fast, very turbid, silty.
7/12/07	15:05	TI04	PHTI04-W-24131[b]	Water	CPT	60.4-65.4	2255	7/13/07	1; 41	Replicate of sample PHTI04-W-24130.
7/12/07	15:43	TI04	PHTI04-S-24132	Soil	CPT	2	2253	7/12/07	1; 44	Vertical-profile soil sampling. Northwest boundary of former CCC/USDA property.
7/12/07	15:57	TI04	PHTI04-S-24133	Soil	CPT	6	2253	7/12/07	1; 44	Vertical-profile soil sampling at TI04.
7/12/07	16:03	TI04	PHTI04-S-24134	Soil	CPT	10	2253	7/12/07	1; 44	Vertical-profile soil sampling at TI04.
7/12/07	16:15	TI04	PHTI04-S-24135	Soil	CPT	14	2253	7/12/07	1; 44	Vertical-profile soil sampling at TI04.
7/12/07	16:27	TI04	PHTI04-S-24136	Soil	CPT	18	2253	7/12/07	1; 44	Vertical-profile soil sampling at TI04.
7/12/07	16:43	TI04	PHTI04-S-24137	Soil	CPT	22	3922	7/12/07	1; 44	Vertical-profile soil sampling at TI04.
7/12/07	16:57	TI04	PHTI04-S-24138	Soil	CPT	26	3922	7/12/07	1; 44	Vertical-profile soil sampling at TI04.
7/12/07	17:10	QC	PHQCTB-W-24140[b]	Water	TB	–	2255	7/13/07	1; 49	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COCs 3938 and 2255.
7/12/07	17:30	QC	PHQCTB-S-24141[b]	Soil	TB	–	3922	7/12/07	1; 44	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COCs 2253 and 3922.
7/13/07	8:15	TI04	No sample			22-27			c	Temporary piezometer dry after time interval. No sample recovered.
7/13/07	8:32	TI04	PHTI04-S-24139	Soil	CPT	30	3923	7/13/07	1; 44	Vertical-profile soil sampling at TI04.
7/13/07	8:51	TI04	PHTI04-S-24150	Soil	CPT	34	3923	7/13/07	1; 44	Vertical-profile soil sampling at TI04.
7/13/07	9:22	TI04	PHTI04-S-24151	Soil	CPT	38	3923	7/13/07	1; 44	Vertical-profile soil sampling at TI04.
7/13/07	9:45	TI04	PHTI04-S-24152	Soil	CPT	42	3923	7/13/07	1; 44	Vertical-profile soil sampling at TI04.
7/13/07	9:46	TI04	PHTI04-S-24153	Soil	CPT	43.25	3923	7/13/07	1; 44	Vertical-profile soil sampling at TI04.
7/13/07	10:16	TI04	PHTI04-S-24154	Soil	CPT	46	3923	7/13/07	1; 44	Vertical-profile soil sampling at TI04.
7/13/07	10:17	TI04	PHTI04-S-24155[b]	Soil	CPT	46	3923	7/13/07	1; 44	Replicate of sample PHTI04-S-24154.
7/13/07	10:39	TI04	PHTI04-S-24156	Soil	CPT	48.75	3923	7/13/07	1; 44	Vertical-profile soil sampling at TI04.
7/13/07	10:40	TI04	PHTI04-S-24157	Soil	CPT	51.75	3923	7/13/07	1; 44	Vertical-profile soil sampling at TI04.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/13/07	11:56	MW7	PHMW7-W-24068	Water	MW	46-56	3938	7/13/07	2; 22	Depth to water from TOC = 6.61 ft. Depth of well = 55.0 ft. Casing is 2 in. Sample collected at low flow after purging of 25 gal with a Redi-Flo pump.
7/13/07	13:20	TI04	PHTI04-W-24158	Water	CPT	55-60	3938	7/13/07	1; 53	Initially dry. After 2 hr, 10 ft of water in rods. Slightly turbid, silty.
7/13/07	13:35	TI02	No sample			47-52			c	Temporary piezometer dry after time interval. No sample recovered.
7/13/07	13:35	TI03	No sample			49-54			c	Temporary piezometer dry after time interval. No sample recovered.
7/13/07	15:46	MW5	PHMW5-W-24160	Water	MW	58-68	3938	7/13/07	2; 26	Depth to water from TOC = 10.8 ft. Depth of well = 68 ft. Casing is 2-in. PVC. Sample collected at low flow after purging of 29 gal with a Redi-Flo pump.
7/13/07	15:47	MW5	PHQCDUP-W-24161[b]	Water	MW	58-68	3938	7/13/07	2; 26	Replicate of sample PHMW5-W-24160.
7/13/07	16:00	QC	PHQCTB-S-24170[b]	Soil	TB	–	3923	7/13/07	1; 44	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COC 3923.
7/13/07	16:08	KDHEP-3	PHKDHEP3-W-24069	Water	MW	52-62	3938	7/13/07	2; 29	Depth to water from TOC = 9.61 ft. Depth of well = 63.33 ft. Casing is 2 in. Sample collected at low flow after purging of 27 gal with a Redi-Flo pump.
7/13/07	16:59	MW4	PHMW4-W-24162	Water	MW	54.7-64.7	3938	7/13/07	2; 33	Depth to water from TOC = 12.68 ft. Depth of well = 65 ft. Casing is 2-in. PVC. Sample collected at low flow after purging of 26 gal with a Redi-Flo pump.
7/13/07	17:00	MW4	PHQCDUP-W-24163[b]	Water	MW	54.7-64.7	3938	7/13/07	2; 33	Replicate of sample PHMW4-W-24162.
7/14/07	6:45	TI01	No sample			54-59			c	Temporary piezometer dry after time interval. No sample recovered.
7/14/07	7:15	TI03	PHTI03-W-24171	Water	CPT	55-60	3924	7/14/07	1; 57	Initially dry. After overnight rest, approximately 8 ft of water in rods. Clear.
7/14/07	10:45	TI18	PHTI18-W-24172	Water	CPT	57.3-62.3	3924	7/14/07	1; 61	East of the northeast corner of former CCC/USDA property. Water entered rods within 30 sec. Sample collected after approximately 8 ft of water entered rods. Slightly turbid, silty.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/14/07	11:22	MW6	PHMW6-W-24164	Water	MW	56-66	3924	7/14/07	2; 37	Depth to water from TOC = 10.29 ft. Depth of well = 69.69 ft. Casing is 4-in. PVC. Sample collected at low flow after purging of 115 gal with a Redi-Flo pump. Purged dry after about 70 gal. Continued purge after 30-min recovery.
7/14/07	13:35	KDHEP-2	PHKDHEP2-W-24165	Water	MW	58.1-68.1	3924	7/14/07	2; 41	Depth to water from TOC = 12.12 ft. Depth of well = 69.00 ft. Casing is 2 in. Sample collected at low flow after purging of 29 gal with a Redi-Flo pump.
7/14/07	14:00	TI04	PHTI04-W-24210	Water	CPT	42-47	3924	7/14/07	1; 69	Sample collected after rods in place approximately 45 hr, with approximately 8 ft of water in rods. Only approximately 5 in. of water was in rods after 24 hr. Very turbid, silty.
7/14/07	14:32	TI04	PHTI04-W-24211	Water	CPT	49-54	3924	7/14/07	1; 73	Sample collected after rods had been in place for 24 hr. Slightly turbid.
7/14/07	14:45	QC	PHQCTB-W-24175[b]	Water	TB	–	3924	7/14/07	1; 65	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COC 3924.
7/14/07	16:33	TI16	PHTI16-W-24176	Water	CPT	61.5-66.5	3927	7/16/07	1; 77	Water entered rods immediately. Very turbid, silty.
7/14/07	16:38	QC	PHQCBR-W-24174[b]	Water	RI	–	3927	7/16/07	1; 81	Rinsate of decontaminated sampling bailer after collection of sample PHTI16-W-24176.
7/15/07	8:03	TI17	PHTI17-W-24177	Water	CPT	58-63	3934	7/16/07	1; 85	North side of Main St.; southeast corner of co-op service station. Initially dry. Sample collected after rods had been in place for approximately 18 hr. Clear.
7/15/07	8:50	TI01	No sample			54-59			c	Temporary piezometer dry after time interval. No sample recovered.
7/15/07	9:51	TI06	PHTI06-S-24178	Soil	CPT	2	3928	7/16/07	1; 88	Vertical-profile soil sampling. Northeast corner of CGSB on former CCC/USDA property.
7/15/07	9:59	TI06	PHTI06-S-24179	Soil	CPT	6	3928	7/16/07	1; 88	Vertical-profile soil sampling at TI06.
7/15/07	10:07	TI06	PHTI06-S-24180	Soil	CPT	10	3928	7/16/07	1; 88	Vertical-profile soil sampling at TI06.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/15/07	10:18	TI06	PHTI06-S-24181	Soil	CPT	14	3928	7/16/07	1; 88	Vertical-profile soil sampling at TI06.
7/15/07	10:32	TI06	PHTI06-S-24182	Soil	CPT	18	3928	7/16/07	1; 88	Vertical-profile soil sampling at TI06.
7/15/07	10:51	TI06	PHTI06-S-24183	Soil	CPT	22	3928	7/16/07	1; 88	Vertical-profile soil sampling at TI06.
7/15/07	11:06	TI06	PHTI06-S-24184	Soil	CPT	26	3928	7/16/07	1; 88	Vertical-profile soil sampling at TI06.
7/15/07	11:07	TI06	PHTI06-S-24185[b]	Soil	CPT	26	3928	7/16/07	1; 88	Replicate of sample PHTI06-S-24184.
7/15/07	11:24	TI06	PHTI06-S-24186	Soil	CPT	30	3928	7/16/07	1; 88	Vertical-profile soil sampling at TI06.
7/15/07	11:43	TI06	PHTI06-S-24187	Soil	CPT	34	3928	7/16/07	1; 88	Vertical-profile soil sampling at TI06.
7/15/07	12:05	TI06	PHTI06-S-24188	Soil	CPT	37.5	3928	7/16/07	1; 88	Vertical-profile soil sampling at TI06.
7/15/07	13:28	TI06	PHTI06-S-24189	Soil	CPT	41.2	3928	7/16/07	1; 88	Vertical-profile soil sampling at TI06.
7/15/07	13:30	TI06	PHTI06-S-24190	Soil	CPT	43	3928	7/16/07	1; 88	Vertical-profile soil sampling at TI06.
7/15/07	13:52	TI06	PHTI06-S-24191	Soil	CPT	46	3928	7/16/07	1; 88	Vertical-profile soil sampling at TI06.
7/15/07	14:18	TI06	PHTI06-S-24192	Soil	CPT	50	3932	7/16/07	1; 88	Vertical-profile soil sampling at TI06.
7/15/07	14:19	TI06	PHTI06-S-24193	Soil	CPT	51.2	3928	7/16/07	1; 88	Vertical-profile soil sampling at TI06.
7/15/07	14:49	TI06	PHTI06-S-24194	Soil	CPT	55.2	3932	7/16/07	1; 88	Vertical-profile soil sampling at TI06.
7/15/07	16:40	TI09	PHTI09-W-24195	Water	CPT	57.6-62.6	3934	7/16/07	1; 93	South side of CGSB, in front of door. Water did not enter rods immediately. Approximately 4 ft of water in rods after 10 min. Turbid, silty.
7/15/07	16:41	TI09	PHTI09-W-24196[b]	Water	CPT	57.6-62.6	3972	7/16/07	1; 97	Replicate of sample PHTI09-W-24195, collected for verification organic analysis.
7/15/07	17:26	TI09	PHTI09-S-24197	Soil	CPT	2	3932	7/16/07	1; 100	Vertical-profile soil sampling. South door of CGSB on former CCC/USDA property.
7/15/07	17:36	TI09	PHTI09-S-24198	Soil	CPT	6	3932	7/16/07	1; 100	Vertical-profile soil sampling at TI09.
7/15/07	17:47	TI09	PHTI09-S-24199	Soil	CPT	10	3932	7/16/07	1; 100	Vertical-profile soil sampling at TI09.
7/15/07	17:57	TI09	PHTI09-S-24200	Soil	CPT	14	3932	7/16/07	1; 100	Vertical-profile soil sampling at TI09.
7/15/07	18:08	TI09	PHTI09-S-24201	Soil	CPT	18	3932	7/16/07	1; 100	Vertical-profile soil sampling at TI09.
7/15/07	18:09	TI09	PHTI09-S-24202[b]	Soil	CPT	18	3932	7/16/07	1; 100	Replicate of sample PHTI09-S-24201.
7/16/07	8:00	TI09	PHTI09-S-24203	Soil	CPT	22	3933	7/16/07	1; 100	Vertical-profile soil sampling at TI09.
7/16/07	8:19	TI09	PHTI09-S-24204	Soil	CPT	26	3933	7/16/07	1; 100	Vertical-profile soil sampling at TI09.
7/16/07	8:43	TI09	PHTI09-S-24205	Soil	CPT	29.2	3933	7/16/07	1; 100	Vertical-profile soil sampling at TI09.
7/16/07	8:44	TI09	PHTI09-S-24206	Soil	CPT	31	3933	7/16/07	1; 100	Vertical-profile soil sampling at TI09.
7/16/07	9:09	TI09	PHTI09-S-24207	Soil	CPT	34	3933	7/16/07	1; 100	Vertical-profile soil sampling at TI09.
7/16/07	9:32	TI09	PHTI09-S-24208	Soil	CPT	38	3933	7/16/07	1; 100	Vertical-profile soil sampling at TI09.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/16/07	10:04	TI09	PHTI09-S-24209	Soil	CPT	41.5	3933	7/16/07	1; 100	Vertical-profile soil sampling at TI09.
7/16/07	10:36	TI09	PHTI09-S-24213	Soil	CPT	46	3933	7/16/07	1; 100	Vertical-profile soil sampling at TI09.
7/16/07	10:54	TI09	PHTI09-S-24214	Soil	CPT	49	3933	7/16/07	1; 100	Vertical-profile soil sampling at TI09.
7/16/07	10:59	TI09	PHTI09-S-24215	Soil	CPT	51	3933	7/16/07	1; 100	Vertical-profile soil sampling at TI09.
7/16/07	11:24	TI09	PHTI09-S-24216	Soil	CPT	53.3	3933	7/16/07	1; 100	Vertical-profile soil sampling at TI09.
7/16/07	11:25	TI09	PHTI09-S-24217	Soil	CPT	55.3	3933	7/16/07	1; 100	Vertical-profile soil sampling at TI09.
7/16/07	14:30	TI06	PHTI06-W-24221	Water	CPT	57.5-62.5	3935	7/16/07	1; 109	Northeast corner of CGSB. Dry when rods were installed on 7/15. Sampled the following day with 20.1 ft of water in rods. Clear.
7/16/07	14:35	QC	PHQCTB-W-24223[b]	Water	TB	–	3935	7/16/07	1; 113	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COCs 3927, 3934, and 3935.
7/16/07	15:05	TI05	PHTI05-W-24224	Water	CPT	59-64	3935	7/16/07	1; 117	Northwest corner of CGSB. Initially dry. Water entered rods after approximately 2 min; 20 ft of water in rods when sampled. Slightly cloudy, trace silt.
7/16/07	15:08	TI02	PHTI02-W-24220	Water	CPT	54-59	3935	7/16/07	1; 105	Northeast corner of concrete pad. Dry when rods installed on 7/13. Less than 1 ft of water on 7/15; 11 ft of water in rods when sampled on 7/16. Clear.
7/16/07	15:50	TI16	No sample			55-60			c	0.6 ft of water in temporary piezometer after time interval. No sample recovered.
7/16/07	15:50	TI18	No sample			51-56			c	0.8 ft of water in temporary piezometer after time interval. No sample recovered.
7/16/07	15:55	TI05	PHTI05-S-24225	Soil	CPT	2	3933	7/16/07	1; 120	Vertical-profile soil sampling. Northwest corner of CGSB.
7/16/07	16:03	TI05	PHTI05-S-24226	Soil	CPT	6	3933	7/16/07	1; 120	Vertical-profile soil sampling at TI05.
7/16/07	16:15	TI05	PHTI05-S-24227	Soil	CPT	10	3939	7/16/07	1; 120	Vertical-profile soil sampling at TI05.
7/16/07	16:25	TI05	PHTI05-S-24228	Soil	CPT	14	3939	7/16/07	1; 120	Vertical-profile soil sampling at TI05.
7/16/07	16:39	TI05	PHTI05-S-24229	Soil	CPT	18	3939	7/16/07	1; 120	Vertical-profile soil sampling at TI05.
7/16/07	16:55	TI05	PHTI05-S-24230	Soil	CPT	22	3939	7/16/07	1; 120	Vertical-profile soil sampling at TI05.
7/16/07	17:11	TI05	PHTI05-S-24231	Soil	CPT	26	3939	7/16/07	1; 120	Vertical-profile soil sampling at TI05.
7/16/07	17:12	TI05	PHTI05-S-24232[b]	Soil	CPT	26	3939	7/16/07	1; 120	Replicate of sample PHTI05-S-24231.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/16/07	17:23	TI05	PHTI05-S-24233	Soil	CPT	30	3939	7/16/07	1; 120	Vertical-profile soil sampling at TI05.
7/16/07	18:00	QC	PHQCTB-S-24260[b]	Soil	TB	–	3939	7/16/07	1; 120	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COCs 3928, 3932, 3933, and 3939.
7/16/07	18:00	QC	PHQCTB-W-24261[b]	Water	TB	–	3972	7/16/07	1; 125	Trip blank sent to Envirosystems for verification organic analysis with water samples listed on COC 3972.
7/17/07	8:06	TI05	PHTI05-S-24234	Soil	CPT	33.7	3940	7/17/07	1; 120	Vertical-profile soil sampling at TI05.
7/17/07	8:29	TI05	PHTI05-S-24235	Soil	CPT	38.9	3940	7/17/07	1; 120	Vertical-profile soil sampling at TI05.
7/17/07	8:51	TI05	PHTI05-S-24236	Soil	CPT	41.8	3940	7/17/07	1; 120	Vertical-profile soil sampling at TI05.
7/17/07	9:15	TI05	PHTI05-S-24237	Soil	CPT	46	3940	7/17/07	1; 120	Vertical-profile soil sampling at TI05.
7/17/07	9:41	TI05	PHTI05-S-24238	Soil	CPT	50	3940	7/17/07	1; 120	Vertical-profile soil sampling at TI05.
7/17/07	10:06	TI05	PHTI05-S-24239	Soil	CPT	53.7	3940	7/17/07	1; 120	Vertical-profile soil sampling at TI05.
7/17/07	10:08	TI05	PHTI05-S-24142	Soil	CPT	55.1	3940	7/17/07	1; 120	Vertical-profile soil sampling at TI05.
7/17/07	11:00	QC	PHQCTB-S-24143[b]	Soil	TB	–	3940	7/17/07	1; 120	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COC 3940.
7/17/07	14:24	TI13	PHTI13-W-24144	Water	CPT	61.1-66.1	3941	7/18/07	1; 129	West of former CCC/USDA property on Kickapoo Indian tribe property. Immediate water to 20 ft after 3 min. Slightly turbid, silty.
7/17/07	14:30	QC	PHQCTB-W-24145[b]	Water	TB	–	3941	7/18/07	1; 135	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COCs 3941 and 3942.
7/17/07	17:13	TI14	PHTI14-W-24146	Water	CPT	63.6-68.6	3941	7/18/07	1; 139	West of former CCC/USDA property on Kickapoo Indian tribe property. Immediate water to 26 ft in rods. Sand heaved into rods. Turbid, very silty.
7/17/07	18:12	TI14	PHTI14-W-24147	Water	CPT	58-63	3941	7/18/07	1; 145	Water entered rods after about 2 min, rising to 44 ft. Only slightly turbid.
7/18/07	10:30	TI15	PHTI15-W-24148	Water	CPT	62.9-67.9	3942	7/18/07	1; 148	Northwest of former CCC/USDA property on south edge of city park. Water did not enter rods initially. After approximately 16 min, approximately 6.5 ft was in rods. Clear sample, very carbonated.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/18/07	12:26	TI19	PHTI19-W-24241	Water	CPT	61.1-66.1	3942	7/18/07	1; 161	Northeast of former CCC/USDA property, east of area where co-op loads and unloads grain. Water entered rods after less than 3 min. Very turbid, silty.
7/18/07	14:15	TI05	PHTI05-W-24240	Water	CPT	53-58	3942	7/18/07	1; 157	Very silty, turbid.
7/18/07	14:41	TI13	PHTI13-W-24149	Water	CPT	55.1-60.1	3942	7/18/07	1; 153	Initially dry; 47 ft of water in rods after 24 hr. Slightly turbid.
7/18/07	15:00	TI13	No sample			22.75-27.85			c	Temporary piezometer dry after time interval. No sample recovered.
7/24/07	10:44	QC	PH-MEOHBLK-072407[b]	Soil	TB	–	3438	7/24/07	COC	Trip blank sent to Severn-Trent for verification organic analysis with soil samples listed on COC 3438.
7/26/07	8:11	TI11	PHTI11-S-24242	Soil	CPT	1.5	3945	7/26/07	1; 162	Vertical-profile soil sampling. West boundary of former CCC/USDA property.
7/26/07	8:35	TI11	PHTI11-S-24243	Soil	CPT	6	3945	7/26/07	1; 162	Vertical-profile soil sampling at TI11.
7/26/07	8:54	TI11	PHTI11-S-24244	Soil	CPT	10	3945	7/26/07	1; 162	Vertical-profile soil sampling at TI11.
7/26/07	9:15	TI11	PHTI11-S-24245	Soil	CPT	14	3945	7/26/07	1; 162	Vertical-profile soil sampling at TI11.
7/26/07	9:37	TI11	PHTI11-S-24246	Soil	CPT	18	3945	7/26/07	1; 162	Vertical-profile soil sampling at TI11.
7/26/07	10:00	TI11	PHTI11-S-24247	Soil	CPT	22	3945	7/26/07	1; 162	Vertical-profile soil sampling at TI11.
7/26/07	10:30	TI11	PHTI11-S-24248	Soil	CPT	26	3945	7/26/07	1; 162	Vertical-profile soil sampling at TI11.
7/26/07	10:30	TI11	PHTI11-S-24249[b]	Soil	CPT	26	3945	7/26/07	1; 162	Replicate of sample PHTI11-S-24248.
7/26/07	10:50	TI22	PHTI22-W-24280	Water	CPT	62-67	3944	7/26/07	3; 9	Screen length (5 ft) selected from sensor profile. High tip pressure with low sleeve pressure indicative of water-bearing zone; 20 ft of water immediately on opening screen. Red-brown water, oxidation.
7/26/07	11:10	TI11	PHTI11-S-24262	Soil	CPT	30	3945	7/26/07	1; 162	Vertical-profile soil sampling at TI11.
7/26/07	11:40	TI11	PHTI11-S-24263	Soil	CPT	34	3945	7/26/07	1; 162	Vertical-profile soil sampling at TI11.
7/26/07	12:23	TI11	PHTI11-S-24264	Soil	CPT	38	3945	7/26/07	1; 162	Vertical-profile soil sampling at TI11.
7/26/07	13:41	TI11	PHTI11-S-24265	Soil	CPT	42	3945	7/26/07	1; 162	Vertical-profile soil sampling at TI11.
7/26/07	14:16	TI23	PHTI23-W-24281	Water	CPT	60.5-65.5	3944	7/26/07	3; 13	East of Commercial St.; north of Second St.; 10-ft screen. Water immediately on opening screen.
7/26/07	14:20	TI11	PHTI11-S-24266	Soil	CPT	46	3945	7/26/07	1; 162	Vertical-profile soil sampling at TI11.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/26/07	14:21	TI23	PHTI23-W-24282[b]	Water	CPT	60.5-65.5	3944	7/26/07	3; 17	Replicate of sample PHTI23-W-24281.
7/26/07	15:20	TI11	PHTI11-S-24267	Soil	CPT	50	3945	7/26/07	1; 162	Vertical-profile soil sampling at TI11.
7/26/07	16:00	QC	PHQCTB-S-24269[b]	Soil	TB	–	3945	7/26/07	1; 162	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COCs 3945 and 3946.
7/26/07	16:05	TI11	PHTI11-S-24268	Soil	CPT	54	3946	7/26/07	1; 162	Vertical-profile soil sampling at TI11.
7/26/07	16:13	TI27	PHTI27-W-24283	Water	CPT	54.7-59.7	3944	7/26/07	3; 21	East of Center St., directly southeast of southwest corner of CGSB. Slow initial water recovery. Aliquots also collected for analysis by Envirosystems.
7/26/07	16:14	QC	PHTI27R-W-24284[b]	Water	RI	–	3944	7/26/07	3; 25	Rinsate of decontaminated sampling bailer after collection of sample PHTI27-W-24283.
7/26/07	16:40	TI11	PHTI11-W-24270	Water	CPT	51.5-56.5	3944	7/26/07	1; 169	Western boundary of former CCC/USDA property. Water immediately, approximately 22 ft in rods. Silty, turbid.
7/26/07	17:35	TI28	PHTI28-W-24285	Water	CPT	54-59	3944	7/26/07	3; 29	East of Center St., along east side of Grasshopper Rd. Good water recovery.
7/26/07	17:40	QC	PHTI28T-W-24286[b]	Water	TB	–	3944	7/26/07	3; 33	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COCs 3944.
7/27/07	7:28	TI10	PHTI10-S-24271	Soil	CPT	2	3948	7/27/07	1; 174	Vertical-profile soil sampling. Southwest corner of CGSB on former CCC/USDA property.
7/27/07	8:15	TI10	PHTI10-S-24273	Soil	CPT	10	3948	7/27/07	1; 174	Vertical-profile soil sampling at TI10.
7/27/07	8:38	TI10	PHTI10-S-24274	Soil	CPT	14	3948	7/27/07	1; 174	Vertical-profile soil sampling at TI10.
7/27/07	8:50	TI10	PHTI10-S-24272	Soil	CPT	6	3948	7/27/07	1; 174	Vertical-profile soil sampling at TI10.
7/27/07	9:02	TI10	PHTI10-S-24275	Soil	CPT	18	3948	7/27/07	1; 174	Vertical-profile soil sampling at TI10.
7/27/07	9:29	TI10	PHTI10-S-24276	Soil	CPT	22	3948	7/27/07	1; 174	Vertical-profile soil sampling at TI10.
7/27/07	10:00	TI10	PHTI10-S-24277	Soil	CPT	26	3948	7/27/07	1; 174	Vertical-profile soil sampling at TI10.
7/27/07	10:45	TI10	PHTI10-S-24278	Soil	CPT	30	3948	7/27/07	1; 174	Vertical-profile soil sampling at TI10.
7/27/07	11:20	TI10	PHTI10-S-24279	Soil	CPT	34	3948	7/27/07	1; 174	Vertical-profile soil sampling at TI10.
7/27/07	11:52	TI10	PHTI10-S-24167	Soil	CPT	38	3948	7/27/07	1; 174	Vertical-profile soil sampling at TI10.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/27/07	12:17	QC	PHTB-W-24290[b]	Water	TB	–	3951	7/27/07	3; 45	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COC 3951.
7/27/07	12:30	TI10	PHTI10-S-24168	Soil	CPT	42	3948	7/27/07	1; 174	Vertical-profile soil sampling at TI10.
7/27/07	12:30	TI10	PHTI10-S-24169[b]	Soil	CPT	42	3948	7/27/07	1; 174	Replicate of sample PHTI10-S-24168.
7/27/07	14:05	TI10	PHTI10-S-24300	Soil	CPT	46	3948	7/27/07	1; 174	Vertical-profile soil sampling at TI10.
7/27/07	14:52	TI25	PHTI25-W-24291	Water	CPT	60-65	3951	7/27/07	3; 53	Centrally located between Second St., Center St., First St., and Commercial St. Water available immediately.
7/27/07	14:55	TI10	PHTI10-S-24301	Soil	CPT	50	3948	7/27/07	1; 174	Vertical-profile soil sampling at TI10.
7/27/07	15:00	TI25	PHTI25-W-24292[b]	Water	CPT	60-65	3951	7/27/07	3; 57	Replicate of sample PHTI25-W-24291.
7/27/07	15:20	QC	PHQCTB-S-24302[b]	Soil	TB	–	3948	7/27/07	1; 174	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COCs 3948 and 3949.
7/27/07	15:34	TI31	PHTI31-W-24287	Water	CPT	52-57	3951	7/27/07	3; 65	Very slow water recovery.
7/27/07	16:13	TI29	PHTI29-W-24289	Water	CPT	50.2-55.2	3951	7/27/07	3; 41	West of unpaved Grasshopper Rd. and south of First St. Extremely slow recovery.
7/27/07	16:30	TI10	PHTI10-W-24304	Water	CPT	54.9-59.9	3951	7/27/07	1; 177	Southwest corner of CGSB. Depth to water = 47.96 ft. Sample collected by using bailer after purging with bailer.
7/27/07	18:03	TI12	PHTI12-S-24305	Soil	CPT	1.4	3950	7/28/07	1; 180	Vertical-profile soil sampling. South of driveway, adjacent to drainage ditch
7/28/07	7:34	TI12	PHTI12-S-24306	Soil	CPT	6	3954	7/28/07	1; 180	Vertical-profile soil sampling at TI12.
7/28/07	7:45	TI12	PHTI12-S-24307	Soil	CPT	10	3954	7/28/07	1; 180	Vertical-profile soil sampling at TI12.
7/28/07	8:15	TI12	PHTI12-S-24308	Soil	CPT	14	3954	7/28/07	1; 180	Vertical-profile soil sampling at TI12.
7/28/07	8:40	TI12	PHTI12-S-24309	Soil	CPT	18	3954	7/28/07	1; 180	Vertical-profile soil sampling at TI12.
7/28/07	9:15	TI08	PHTI08-W-24294	Water	CPT	56-61	3952	7/28/07	3; 69	Located at southeast corner of CGSB on former CCC/USDA property.
7/28/07	9:17	TI12	PHTI12-S-24310	Soil	CPT	22	3954	7/28/07	1; 180	Vertical-profile soil sampling at TI12.
7/28/07	9:18	TI08	PHTI08-W-24295[b]	Water	CPT	56-61	3952	7/28/07	3; 73	Replicate of sample PHTI08-W-24294.
7/28/07	9:50	TI12	PHTI12-S-24311	Soil	CPT	26	3954	7/28/07	1; 180	Vertical-profile soil sampling at TI12.
7/28/07	10:25	TI12	PHTI12-S-24312	Soil	CPT	30	3954	7/28/07	1; 180	Vertical-profile soil sampling at TI12.
7/28/07	10:55	TI12	PHTI12-S-24313	Soil	CPT	34	3954	7/28/07	1; 180	Vertical-profile soil sampling at TI12.
7/28/07	11:35	TI12	PHTI12-S-24314	Soil	CPT	38	3954	7/28/07	1; 180	Vertical-profile soil sampling at TI12.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/28/07	12:08	TI12	PHTI12-S-24315	Soil	CPT	42	3954	7/28/07	1; 180	Vertical-profile soil sampling at TI12.
7/28/07	13:00	TI12	PHTI12-S-24316	Soil	CPT	46	3954	7/28/07	1; 180	Vertical-profile soil sampling at TI12.
7/28/07	13:50	TI26	PHTI26-W-24293	Water	CPT	55.8-60.8	3952	7/28/07	3; 61	West of Center St. and north of First St. Poor evidence of water-bearing unit on sensor log. No obvious sand interval.
7/28/07	14:10	TI30	PHTI30-W-24298	Water	CPT	52-57	3952	7/28/07	3; 85	East of unpaved Grasshopper Rd. Recovery very slow. Set temporary piezometer and waited for 24 hr for representative sample.
7/28/07	14:41	QC	PHTB2-W-24299[b]	Water	TB	–	3952	7/28/07	3; 89	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COC 3952.
7/28/07	15:00	QC	PHQCTB-S-24250[b]	Soil	TB	–	3954	7/28/07	COC	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COCs 3954 and 3950.
7/28/07	16:05	TI08	PHTI08-S-24319	Soil	CPT	1.5	3957	7/30/07	1; 184	Vertical-profile soil sampling. Southeast corner of CGSB on former CCC/USDA property.
7/28/07	16:25	TI08	PHTI08-S-24320	Soil	CPT	6	3957	7/30/07	1; 184	Vertical-profile soil sampling at TI08.
7/28/07	16:50	TI08	PHTI08-S-24321	Soil	CPT	9	3957	7/30/07	1; 184	Vertical-profile soil sampling at TI08.
7/28/07	17:10	TI08	PHTI08-S-24322	Soil	CPT	14	3957	7/30/07	1; 184	Vertical-profile soil sampling at TI08.
7/28/07	17:26	TI08	PHTI08-S-24323	Soil	CPT	18	3957	7/30/07	1; 184	Vertical-profile soil sampling at TI08.
7/29/07	8:05	TI08	PHTI08-S-24324	Soil	CPT	22	3963	7/30/07	1; 184	Vertical-profile soil sampling at TI08.
7/29/07	8:35	TI08	PHTI08-S-24325	Soil	CPT	26	3963	7/30/07	1; 184	Vertical-profile soil sampling at TI08.
7/29/07	8:58	TI08	PHTI08-S-24326	Soil	CPT	30	3963	7/30/07	1; 184	Vertical-profile soil sampling at TI08.
7/29/07	9:38	TI08	PHTI08-S-24327	Soil	CPT	33	3963	7/30/07	1; 184	Vertical-profile soil sampling at TI08.
7/29/07	10:10	TI08	PHTI08-S-24328	Soil	CPT	38	3963	7/30/07	1; 184	Vertical-profile soil sampling at TI08.
7/29/07	10:29	TI20	PHTI20-W-24251	Water	CPT	57.24-63.24	3960	7/30/07	3; 93	West of Center St. and South of Third St. Slow recovery. Waited 20 min for sample. Limited water.
7/29/07	10:43	TI08	PHTI08-S-24329	Soil	CPT	42	3963	7/30/07	1; 184	Vertical-profile soil sampling at TI08.
7/29/07	10:43	QC	PHTI20R-W-24252[b]	Water	RI	–	3960	7/30/07	3; 97	Rinsate of decontaminated sampling bailer after collection of sample PHTI20-W-24251.
7/29/07	11:30	TI08	PHTI08-S-24330	Soil	CPT	46	3963	7/30/07	1; 184	Vertical-profile soil sampling at TI08.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/29/07	12:05	TI08	PHTI08-S-24331	Soil	CPT	50	3963	7/30/07	1; 184	Vertical-profile soil sampling at TI08.
7/29/07	12:05	TI08	PHTI08-S-24332[b]	Soil	CPT	50	3963	7/30/07	1; 184	Replicate of sample PHTI08-S-24331.
7/29/07	12:45	TI08	PHTI08-S-24333	Soil	CPT	54	3963	7/30/07	1; 184	Vertical-profile soil sampling at TI08.
7/29/07	13:42	TI21	PHTI21-W-24253	Water	CPT	60.8-65.8	3960	7/30/07	3; 101	Directly south of Third St., between Commercial and Center St. Immediate water recovery.
7/29/07	14:25	TI18	PHTI18-S-24334	Soil	CPT	2	3963	7/30/07	1; 188	Vertical-profile soil sampling. Northeast of former CCC/USDA property.
7/29/07	14:45	TI18	PHTI18-S-24335	Soil	CPT	6	3963	7/30/07	1; 188	Vertical-profile soil sampling at TI18.
7/29/07	14:57	TI32	PHTI32-W-24297	Water	CPT	54.5-59.5	3960	7/30/07	3; 81	South of Main St., east of Center St. extension. Slow recovery. Set temporary piezometer.
7/29/07	14:59	TI07	PHTI07-W-24296	Water	CPT	56.14-61.14	3960	7/30/07	3; 77	East side of former CCC/USDA property. No water upon opening screen.
7/29/07	15:05	TI18	PHTI18-S-24336	Soil	CPT	10	3963	7/30/07	1; 188	Vertical-profile soil sampling at TI18
7/29/07	15:23	TI18	PHTI18-S-24337	Soil	CPT	14	3963	7/30/07	1; 188	Vertical-profile soil sampling at TI18
7/29/07	15:43	TI18	PHTI18-S-24338	Soil	CPT	18	3963	7/30/07	1; 188	Vertical-profile soil sampling at TI18
7/29/07	15:52	TI33	PHTI33-W-24254	Water	CPT	60.6-65.6	3960	7/30/07	3; 105	Directly offset from KDHE-2 well. Immediate water recovery upon opening screen; 20 ft of water in rods.
7/29/07	16:21	TI18	PHTI18-S-24339	Soil	CPT	21.5	3959	7/30/07	1; 188	Vertical-profile soil sampling at TI18
7/29/07	16:50	TI18	PHTI18-S-24340	Soil	CPT	26	3959	7/30/07	1; 188	Vertical-profile soil sampling at TI18
7/29/07	17:20	TI18	PHTI18-S-24341	Soil	CPT	30	3959	7/30/07	1; 188	Vertical-profile soil sampling at TI18
7/30/07	8:00	TI18	PHTI18-S-24342	Soil	CPT	34	3975	7/30/07	1; 188	Vertical-profile soil sampling at TI18
7/30/07	8:24	TI18	PHTI18-S-24343	Soil	CPT	38	3975	7/30/07	1; 188	Vertical-profile soil sampling at TI18
7/30/07	8:24	TI18	PHTI18-S-24344[b]	Soil	CPT	38	3975	7/30/07	1; 188	Replicate of sample PHTI18-S-24343.
7/30/07	9:15	TI18	PHTI18-S-24345	Soil	CPT	42	3975	7/30/07	1; 188	Vertical-profile soil sampling at TI18
7/30/07	9:50	TI18	PHTI18-S-24346	Soil	CPT	46	3975	7/30/07	1; 188	Vertical-profile soil sampling at TI18
7/30/07	11:30	TI18	PHTI18-S-24347	Soil	CPT	50	3975	7/30/07	1; 188	Vertical-profile soil sampling at TI18
7/30/07	12:25	TI18	PHTI18-S-24348	Soil	CPT	54	3975	7/30/07	1; 188	Vertical-profile soil sampling at TI18
7/30/07	13:00	QC	PHTB3-W-24255[b]	Water	TB	–	3960	7/30/07	3; 109	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COCs 3968 and 3960.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/30/07	13:46	TI36	PHTI36-W-24349	Water	CPT	57.7-62.7	3968	7/30/07	3; 113	Northeast corner of alley at First St. and Center St. Water entered hole immediately. Water level at 49 ft and rising. Slightly silty.
7/30/07	13:46	TI36	PHTI36-W-24351[b]	Water	CPT	57.7-62.7	3967	7/30/07	3; 121	Replicate of sample PHTI36-W-24349 for verification organic analysis by Envirosystems.
7/30/07	14:25	TI24	PHTI24-W-24350	Water	CPT	68.58-73.58	3968	7/30/07	3; 117	Southwest corner of city park. Northeast corner of Commercial and Main. Water entered borehole immediately, with level at 42.5 ft and rising. Silty, reddish brown. Oxidized?
7/30/07	15:05	TI38	PHTI38-W-24352	Water	CPT	55.2-60.2	3968	7/30/07	3; 125	Between alley and Center St., along north side of First St. Water entered hole immediately to 49.77 ft and rising. Reddish brown, silty.
7/30/07	16:00	TI34	PHTI34-W-24353	Water	CPT	62.26-67.26	3968	7/30/07	3; 135	West of former CCC/USDA property, about 1/2 block on south side of Second St. Water entered rods immediately to 42.6 ft and rising. Silty, red-brown water.
7/30/07	16:10	QC	PHQCBR-W-24354[b]	Water	RI	–	3968	7/30/07	3; 139	Rinsate of decontaminated sampling bailer after collection of sample PHTI34-W-24353.
7/30/07	16:30	QC	PHQCTB-S-24355[b]	Soil	TB	–	3975	7/30/07	1; 188	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COCs 3963, 3957, 3975, and 3959.
7/30/07	16:30	QC	PHQCTB-W-24356[b]	Water	TB	–	3967	7/30/07	3; 145	Trip blank sent to Envirosystems for verification organic analysis with water samples listed on COC 3967.
7/31/07	7:38	TI37	PHTI37-W-24256	Water	CPT	53.7-58.7	3971	8/1/07	3; 149	South of CGSB on former CCC/USDA property. Initially dry. Allowed to rest overnight. Water level at 14.7 ft prior to sampling. Very clear water.
7/31/07	8:19	TI07	PHTI07-S-24357	Soil	CPT	2	3976	8/1/07	1; 192	Vertical-profile soil sampling. West side of former CCC/USDA property.
7/31/07	8:31	TI07	PHTI07-S-24358	Soil	CPT	6	3976	8/1/07	1; 192	Vertical-profile soil sampling at TI07.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
7/31/07	8:40	TI07	PHTI07-S-24359	Soil	CPT	10	3976	8/1/07	1; 192	Vertical-profile soil sampling at TI07.
7/31/07	8:49	TI07	PHTI07-S-24257	Soil	CPT	14	3976	8/1/07	1; 192	Vertical-profile soil sampling at TI07.
7/31/07	9:01	TI07	PHTI07-S-24258	Soil	CPT	18	3976	8/1/07	1; 192	Vertical-profile soil sampling at TI07.
7/31/07	9:13	TI07	PHTI07-S-24259	Soil	CPT	22	3976	8/1/07	1; 192	Vertical-profile soil sampling at TI07.
7/31/07	9:33	TI07	PHTI07-S-24660	Soil	CPT	26	3976	8/1/07	1; 192	Vertical-profile soil sampling at TI07.
7/31/07	9:49	TI07	PHTI07-S-24661	Soil	CPT	30	3976	8/1/07	1; 192	Vertical-profile soil sampling at TI07.
7/31/07	10:07	TI07	PHTI07-S-24662	Soil	CPT	34	3976	8/1/07	1; 192	Vertical-profile soil sampling at TI07.
7/31/07	10:07	TI07	PHTI07-S-24663[b]	Soil	CPT	34	3976	8/1/07	1; 192	Replicate of sample PHTI07-S-24662.
7/31/07	10:27	TI07	PHTI07-S-24664	Soil	CPT	38	3976	8/1/07	1; 192	Vertical-profile soil sampling at TI07.
7/31/07	10:46	TI07	PHTI07-S-24665	Soil	CPT	42	3976	8/1/07	1; 192	Vertical-profile soil sampling at TI07.
7/31/07	11:05	TI07	PHTI07-S-24666	Soil	CPT	46	3976	8/1/07	1; 192	Vertical-profile soil sampling at TI07.
7/31/07	11:39	TI07	PHTI07-S-24667	Soil	CPT	50	3976	8/1/07	1; 192	Vertical-profile soil sampling at TI07.
7/31/07	12:24	TI07	PHTI07-S-24668	Soil	CPT	54	3976	8/1/07	1; 192	Vertical-profile soil sampling at TI07.
8/1/07	13:26	TI43	PHTI43-W-24680	Water	CPT	59-64	3977	8/1/07	3; 157	Northeast corner of former CCC/USDA property. Water came in immediately. Slightly turbid.
8/1/07	13:35	MW11	PHMW11-W-24669[d]	Water	MW	55.5-65.5	3977	8/1/07	3; 153	New piezometer approximately 10 ft east of TI04 profile location. Field evaluation sample collected prior to development. Slightly turbid.
8/1/07	14:30	QC	PHQCTB-W-24681[b]	Water	TB	–	3977	8/1/07	3; 161	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COCs 3977 and 3971.
8/1/07	14:40	QC	PHQCTB-S-24682[b]	Soil	TB	–	3974	8/1/07	1; 192	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COCs 3976 and 3974. Not received with shipment, per J. Alvarado, in the AGEM Laboratory.
8/1/07	14:48	TI35	PHTI35-W-24684	Water	CPT	65-70	3977	8/1/07	3; 169	Southwest corner of Second and Commercial. Water entered rods immediately. Slightly turbid, some silt.
8/1/07	15:30	QC	PHGW-W-24683	Water	FB	–	3977	8/1/07	3; 165	Field blank of water used during 2007 investigation, collected from hydrant at north end of co-op office. Water source is Brown County Rural Water District.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
8/2/07	9:20	TI44	PHTI44-W-24685	Water	CPT	59.1-64.1	3980	8/2/07	3; 173	Between Commercial and Center, in alley. Immediate water to 45 ft and rising.
8/2/07	9:25	QC	PHQCBR-W-24686[b]	Water	RI	–	3980	8/2/07	3; 177	Rinsate of decontaminated sampling bailer after collection of sample PHTI44-W-24685.
8/2/07	11:20	TI45	PHTI45-W-24690	Water	CPT	61.3-66.3	3980	8/2/07	1; 197	On Commercial between First and Second. Water entered rods immediately. Very turbid, silty.
8/2/07	14:09	TI12	PHTI12-W-24688	Water	CPT	53.6-58.6	3980	8/2/07	3; 185	South of CGSB on former CCC/USDA property. Sample collected after purging the hole dry and allowing an overnight rest. Sample clear.
8/2/07	14:31	MW12	PHMW12-W-24687[d]	Water	MW	50.3-60.3	3980	8/2/07	3; 181	New piezometer in northwest portion of former CCC/USDA property. Field evaluation sample collected prior to development. Slightly silty.
8/2/07	15:00	QC	PHQCTB-W-24689[b]	Water	TB	–	3980	8/2/07	3; 189	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COC 3980.
8/3/07	12:10	TI42	PHTI42-W-24694	Water	CPT	63.71-68.71	3979	8/3/07	1; 201	Northeast of northernmost co-op building. Water entered rods immediately; 21.55 ft in rods. Silty.
8/3/07	12:50	TI39	PHTI39-W-24691	Water	CPT	53.5-58.5	3979	8/3/07	3; 193	Cone penetrometer sample.
8/3/07	13:07	QC	PHTB4-W-24692[b]	Water	TB	–	3979	8/3/07	3; 197	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COC 3979.
8/3/07	13:20	TI41	PHTI41-W-24695	Water	CPT	63.56-68.56	3979	8/3/07	2; 45	West of northernmost co-op building. Water in hole immediately to 47.65 ft. Silty.
8/3/07	13:20	TI41	PHTI41-W-24696[b]	Water	CPT	63.56-68.56	3978	8/3/07	2; 49	Replicate of sample PHTI41-W-24695, sent to Envirosystems for verification organic analysis.
8/3/07	14:00	QC	PHWW-03Aug07[b]	Water	BT	–	e	8/3/07	e	Composite sample of wastewater generated during CPT sampling and well installation activities, July 10-August 3, 2007.
8/3/07	14:01	QC	PHTB-03Aug07[b]	Water	TB	–	e	8/3/07	e	Trip blank sent to Pace Analytical with wastewater sample PHWW-03Aug07.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
8/3/07	16:00	QC	PHQCTB-W-24697[b]	Water	TB	–	3978	8/3/07	COC	Trip blank sent to Envirosystems for verification organic analysis with water samples listed on COC 3978.
8/9/07	9:33	QC	PH-MEOHBLK-080907[b]	Soil	TB	–	3439	8/9/07	COC	Trip blank sent to Severn-Trent for verification organic analysis with soil samples listed on COC 3439.
8/22/07	10:06	MW14	PHMW14-W-24670	Water	MW	52-62	3981	8/23/07	4; 6	Depth to water from TOC = 12.5 ft. Depth of 1-in. well = 61.25 ft. Sample collected after purging of 6 well volumes (18 gal) with a Wacker pump for well development.
8/22/07	10:27	TI40	PHTI40-W-24671	Water	CPT	50.89-55.89	3981	8/23/07	4; 10	Well screen and riser (1/2 in.) in place 3 weeks after installation on August 3 still had minimal water available. Purged dry while bailing aliquots for field parameters and VOCs analyses. Still dry after 2 days. Pulled rods and plugged hole.
8/22/07	10:45	MW15	PHMW15-W-24672	Water	MW	59-69	3981	8/23/07	4; 14	Depth to water from TOC = 14.5 ft. Depth of 1-in. well = 68.2 ft. Sample collected after purging of 6 well volumes (18 gal) with a Wacker pump for well development.
8/22/07	10:56	MW17	PHMW17-W-24673	Water	MW	52-62	3981	8/23/07	4; 18	Depth to water from TOC = 11.76 ft. Depth of 1-in. well = 61.35 ft. Sample collected after purging of 6 well volumes (12 gal) with a Wacker pump for well development. Poor production, < 1 gpm.
8/22/07	11:11	MW13	PHMW13-W-24674	Water	MW	51.8-61.8	3981	8/23/07	4; 22	Depth to water from TOC = 11.85 ft. Depth of 1-in. well = 60.0 ft. Sample collected after purging of 6 well volumes (20 gal) with a Wacker pump for well development.
8/22/07	17:55	MW16	PHMW16-W-24675	Water	MW	57-67	3981	8/23/07	4; 26	Depth to water from TOC = 14.3 ft. Depth of 1-in. well = 65.7 ft. Sample collected after purging of 6 well volumes (17 gal) with a Wacker pump for well development.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
8/23/07	9:56	MW11	PHMW11-W-24676	Water	MW	55.5-65.5	3982	8/23/07	4; 30	Depth to water from TOC = 11.55 ft. Depth of 1-in. well = 63.4 ft. Sample collected after purging of 6 well volumes (16 gal) with a Wacker pump for well development. Split sent to Envirosystems.
8/23/07	11:57	MW12	PHMW12-W-24677	Water	MW	50.3-60.3	3982	8/23/07	4; 34	Depth to water from TOC = 10.6 ft. Depth of 1-in. well = 60.3 ft. Sample collected after purging of 6 well volumes (14 gal) with a Wacker pump for well development.
8/23/07	13:05	Smith	PHSMITH-W-24678	Water	DW	Unknown	3982	8/23/07	4; 46	Address: 208 Center. Well is approximately 20 ft north of the northwest corner of the trailer. Depth to water = 5.5 ft. Depth of well = 31.52 ft (questionable).
8/23/07	13:07	QC	PHQCIR4-W-24679[b]	Water	RI	–	3982	8/23/07	4; 37	Equipment rinsate prior to collection of sample PHSCHUETZ-W-24700.
8/23/07	13:18	Schuetz	PHSCHUETZ-W-24700[b]	Water	DW	Unknown	3982	8/23/07	4; 42	Address: 215 S. Commercial. Well is approximately 75 ft SE of house in small grove of trees (east side of fenced area for day care). Family not related to Schuetz at 102 S. West. House formerly owned by Novich. Hand jack pump. Enough water for two 20-mL vials. Dirty, smelly water.
8/23/07	13:42	Kickapoo	PHKICKAPOO-W-24701[b]	Water	DW	Unknown	3982	8/23/07	4; 50	Garage well on Kickapoo property, west of co-op. Well is on the west side of garage on property where we collected water samples at TI14.
8/23/07	13:43	Kickapoo	PHKICKAPOODUP-W-24702[b]	Water	DW	Unknown	3982	8/23/07	4; 50	Replicate of sample PHKICKAPOO-W-24701.
8/23/07	14:45	QC	PHQCTB-W-24703[b]	Water	TB	–	3982	8/23/07	4; 53	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COCs 3981 and 3982.

TABLE C.1 (Cont.)

Date	Time (hr)	Location	Sample	Medium	Type[a]	Depth (ft)	Chain of Custody	Shipment Date	Log; Page	Sample Description
8/23/07	14:46	QC	PHQCTB-W-24703b[b]	Water	TB	–	3983	8/23/07	4; 53	Trip blank sent to Envirosystems with sample listed on COC 3983.
9/5/07	14:00	QC	PHWW-05Sep07[b]	Water	BT	–	f	9/5/07	f	Composite sample of wastewater generated during monitoring well development and sampling on August 22-23, 2007.

[a] Sample types: BT, waste characterization; CPT, cone penetrometer; DW, private domestic well; FB, field blank; MW, monitoring well; RI, rinsate; TB, trip blank.

[b] Quality control sample collected to monitor sample collection, handling, and analysis activities.

[c] Personal communication from Lisa Larsen on 2/14/08.

[d] Field evaluation sample; results not reported as part of 2007 investigation data set.

[e] Personal communication from Lisa Larsen on 8/13/07.

[f] Personal communication from Lisa Larsen on 9/10/07.

Appendix D:

Coordinates Survey Data

TABLE D.1 Coordinates survey data for the 2007 investigation at Powhattan, Kansas.

	Horizontal Location[a] (ft)		Elevation[b] (ft AMSL)	
Location	Northing	Easting	Ground	Top of Casing
Vertical profiling locations				
TI01	528838.15	1977726.26	1208.14	–
TI02	528779.32	1977731.93	1207.62	–
TI03	528826.60	1977602.61	1208.50	–
TI04	528734.91	1977651.20	1208.45	–
TI05	528661.34	1977677.70	1207.75	–
TI06	528729.66	1977818.17	1207.19	–
TI07	528573.70	1977906.73	1208.00	–
TI08	528445.89	1977977.23	1208.48	–
TI09	528418.69	1977912.70	1208.20	–
TI10	528393.31	1977854.06	1208.37	–
TI11	528558.14	1977743.82	1208.59	–
TI12	528355.20	1977977.43	1205.79	–
TI13	528657.38	1977524.73	1209.29	–
TI14	528776.46	1977454.89	1209.87	–
TI15	528932.15	1977523.63	1210.01	–
TI16	528927.05	1977666.45	1209.22	–
TI17	528934.01	1977764.30	1208.76	–
TI18	528840.38	1977828.52	1207.34	–
TI19	529116.38	1977767.72	1209.70	–
TI20	529202.84	1977852.83	1207.58	–
TI21	529232.32	1977580.04	1208.95	–
TI22	529114.88	1977374.02	1210.01	–
TI23	528600.71	1977419.32	1210.79	–
TI24	528941.40	1977379.13	1211.05	–
TI25	528366.98	1977568.08	1208.17	–
TI26	528298.86	1977740.72	1205.00	–
TI27	528327.91	1977884.56	1205.26	–
TI28	528260.91	1977940.10	1204.93	–
TI29	528138.79	1977953.96	1202.29	–
TI30	528303.78	1978007.21	1204.69	–
TI31	528259.56	1978023.77	1204.69	–
TI32	528845.76	1977972.94	1206.89	–
TI33	529116.22	1977577.35	1208.80	–
TI34	528493.85	1977511.43	1208.81	–
TI35	528457.90	1977361.21	1209.67	–
TI36	528166.15	1977590.81	1204.75	–
TI37	528282.68	1977969.08	1206.01	–
TI38	528167.15	1977683.00	1203.98	–
TI39	527944.38	1977611.95	1200.65	–
TI40	528018.25	1977766.68	1200.68	–
TI41	529323.59	1977471.36	1208.57	–
TI42	529430.94	1977576.88	1208.49	–
TI43	528839.32	1977769.21	1208.79	–
TI44	528289.46	1977568.48	1207.30	–
TI45	528194.05	1977367.14	1208.05	–
Existing KDHE monitoring wells				
KDHEP-1	528852.99	1977726.68	1208.36	1208.37
KDHEP-2	529122.99	1977576.41	1207.90	1209.63
KDHEP-3	528196.10	1977915.16	1203.73	1205.19

TABLE D.1 (Cont).

Location	Horizontal Location[a] (ft)		Elevation[b] (ft AMSL)	
	Northing	Easting	Ground	Top of Casing
Existing KDHE monitoring wells (cont.)				
MW4	529301.04	1977739.36	1209.90	1208.86
MW5	529272.97	1977275.65	1209.23	1208.57
MW6	529024.70	1977890.60	1207.19	1206.87
MW7	528349.92	1978102.30	1204.95	1204.68
MW8	528833.66	1977391.90	1211.79	1211.44
MW9	528714.55	1978047.66	1204.65	1204.42
MW10	528484.77	1977720.08	1208.45	1208.03
CCC/USDA 2007 investigation monitoring wells				
MW11	528741.61	1977661.88	1208.50	1208.18
MW12	528388.03	1977866.77	1207.27	1206.85
MW13	528446.34	1977958.79	1208.36	1207.61
MW14	528059.41	1977606.91	1203.63	1203.08
MW15	528448.32	1977355.12	1209.58	1208.78
MW16	529399.24	1977524.73	1207.99	1207.31
MW17	528625.49	1977872.58	1208.11	1207.55
Private wells				
Kickapoo	NS[d]	NS	NS	NS
Schuetz, B.	NS	NS	NS	NS
Smith, L.	NS	NS	NS	NS
Co-op grain storage building				
BLDG COR	528757.15	1977785.89	1209.31	–
BLDG COR	528691.55	1977674.59	1209.15	–
BLDG COR	528462.42	1977959.86	1209.39	–
BLDG COR	528396.66	1977848.67	1208.38	–

[a] Coordinates are in the State Plane, Kansas northern zone. Horizontal datum is North American Datum (NAD) 83.

[b] Vertical datum is North American Vertical Datum (NAVD) 29.

[c] Aboveground completion.

[d] NS, not surveyed.

Appendix E:

Summary of Property Documentation

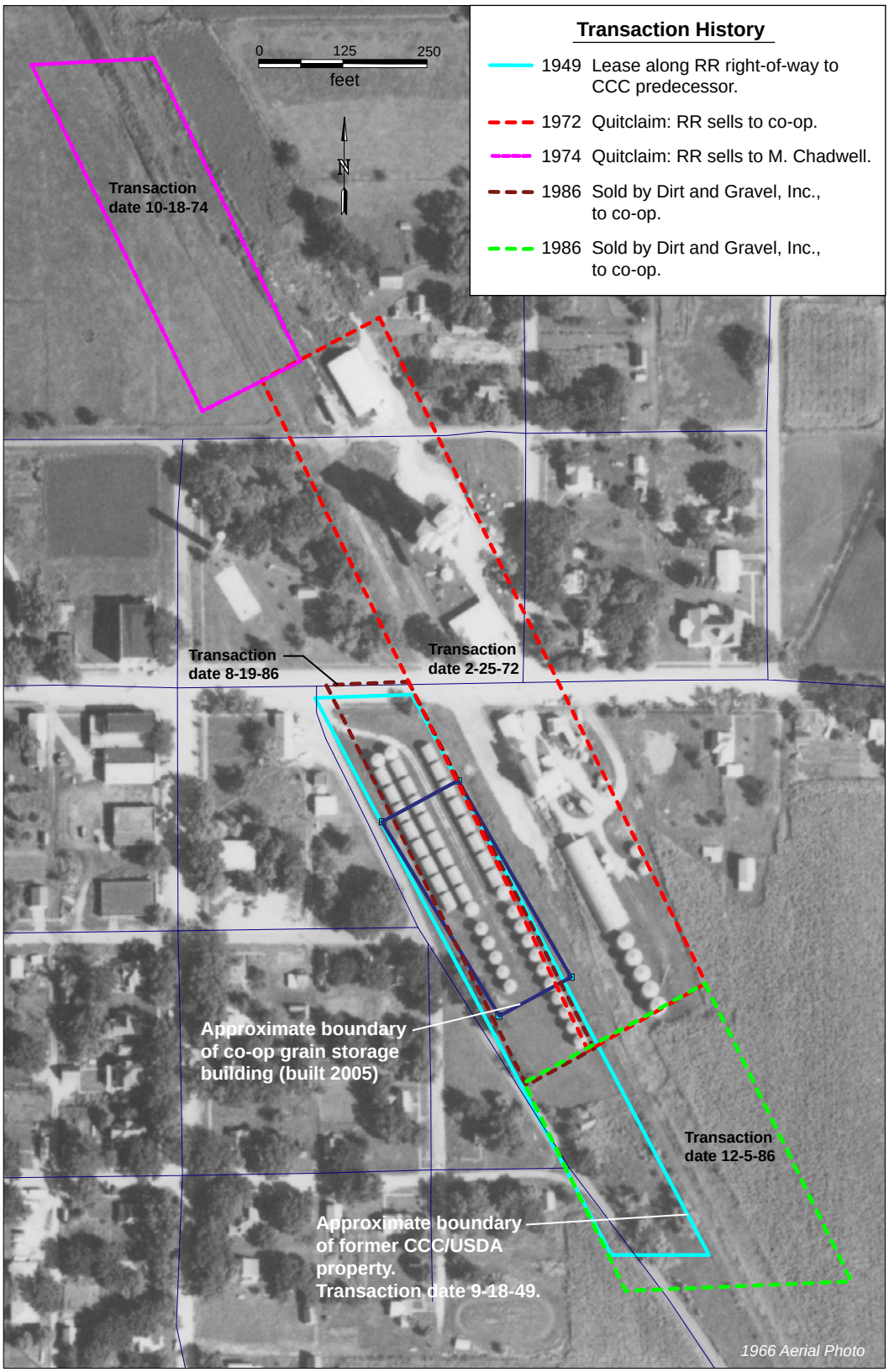


FIGURE E.1 The former CCC/USDA facility and historic leases at Powhattan.

TABLE E.1 Property documentation related to the former CCC/USDA grain storage facility and private grain storage operations in Powhattan, Kansas.[a]

Date	Documentation
9/15/1949	Lease of property along railroad right-of-way to Brown County Agricultural Conservation Association, predecessor to the CCC/USDA. The former CCC/USDA property is located in the southwest quarter of Section 28, west of the former railroad. Parcel is 950 ft x 138 ft x 950 ft x 138 ft, or 3 acres. No subsequent leases and no termination agreement are on file with the Brown County Register of Deeds.
7/13/1954	1954 aerial photo from KDHE files (KDHE 2006a). Photo shows a total of 28 grain storage structures on the former CCC/USDA facility west of the railroad (24 rectangular structures and 4 circular bins).
6/13/1959	1959 aerial photo, Photo ID YY-2W-120. Photo shows a total of 43 grain storage structures on the former CCC/USDA facility west of the railroad (24 rectangular structures and 19 circular bins). A Quonset hut and 5 large circular bins that did not appear in the 1954 photo are now visible east of the railroad on co-op property.
9/8/1966	1966 aerial photo, Photo ID YY-1GG-63. Photo shows the 43 CCC/USDA grain storage structures also visible in the 6/13/1959 photo.
2/25/1972	Chicago, Rock Island, and Pacific Railroad Company sells a portion of its depot grounds in Powhattan to the Brown County Cooperative Association. Concerns co-op property east of the former railroad tracks: 1,110 ft x 200 ft x 1,110 ft x 200 ft, or 5.1 acres.
7/16/1972	1972 aerial photo, Photo ID 20013-172-40C. Only two circular bins remain on the former CCC/USDA property west of the railroad. A wooden elevator is visible on co-op property east of the railroad and north of the Quonset hut.
10/18/1974	Sale of a portion of the depot grounds to Mary Chadwell by the railroad. Parcel lies north of the former CCC/USDA facility and west of the former railroad (150 ft x 575 ft x 170 ft x 500 ft, or 1.85 acres). Property sold includes a portion of the depot grounds in the northwest quarter of Section 28 west of the former railroad.
9/9/1981	1981 aerial photo, Photo ID 20013-181-104C. No grain storage structures remain on the former CCC/USDA property. The easternmost portion of the former CCC/USDA property is being used for equipment storage, including drums and portable fertilizer tanks. No longer visible is the wooden elevator formerly located on co-op property east of the former railroad and north of the Quonset.
4/1/1986	Railroad right-of-way through many sections (except for parcels already conveyed) is sold by the railroad to Dirt and Gravel, Inc. Parcels on the right-of-way through Powhattan already conveyed include (1) the co-op property east of the railroad (200 ft x 1,110 ft, or 5.1 acre) conveyed on 2/25/1972; (2) the Chadwell property west of the railroad and north of the former CCC/USDA facility (170 ft x 500 ft x 150 ft x 575 ft, or 1.85 acre) conveyed on 10/18/1974; and (3) an undocumented 6.83 acres located in the northwest quarter and the southwest quarter of Section 28. The undocumented 6.83-acre property is the remaining railroad right-of-way through Powhattan; it would include the former CCC/USDA property (see the 8/19/1986 and 12/5/1986 transactions) and probably the parcel south of the Chadwell property (west of the railroad), as well as parcels north and south of the co-op (east of the railroad). Dirt and Gravel, Inc., bought inactive Rock Island Railroad properties in Kansas and salvaged the tracks, iron, and gravel, for sale to various companies. When the salvage operations were complete, Dirt and Gravel, Inc., sold the properties. Dirt and Gravel, Inc., never used chemicals in their salvage operations. The company is no longer in business (Fick 2008, Murray 2008).

TABLE E.1 (Cont.)

Date	Documentation
8/19/1986	Property west of the portion of the depot grounds that was sold to the co-op by the railroad on 2/25/1972 is now sold to the Brown County Farmers Co-op [*sic*] by Dirt and Gravel. Property measures 625 ft x 100 ft x 675 ft x 110 ft, or 1.49 acres. The tract includes the northern portion of the former CCC/USDA property, which contained the grain structures visible in the 1966 aerial photograph.
12/5/1986	An additional parcel of the former railroad depot grounds is sold to the Brown County Co-op [*sic*] by Dirt and Gravel, Inc. Property measures 465 ft x 340 ft x 320 ft x 300 ft. The tract includes the southern portion of the former CCC/USDA property, which did not contain grain structures, as well as property east of the former railroad.
2/29/1988	Interview of Ralph Kneisel, long-term employee of the co-op, by KDHE personnel (KDHE 1988a). The government storage area (the former CCC/USDA facility) consisted of approximately 30 bins that were constructed in 1949 and torn down in approximately 1966. The south elevator (on co-op property) was made of wood and was constructed in 1898 and torn down in 1978.
10/7/1991	1991 aerial photo obtained by CCC/USDA. Photo ID NAPP-4229-17A. The former CCC/USDA property is being used for temporary storage.
1/29/1997	The Brown County Farm Service Agency (FSA) prepared the *Former CCC Grain Bin Storage Facilities Survey* form at the request of CCC/USDA to identify former grain storage operations. The "type of structure" is entered as "4 wood bins with wood floor," plus "4 aluminum bins and 21 steel bins with tin floors" (a total of 29 structures). However, the number of bins (including Quonset huts) is entered as 49, a number inconsistent with both the description and other observations. The description of 29 structures on the FSA form is consistent with the Kneisel statement (KDHE 1988a) that approximately 30 structures were on the former CCC/USDA property. However, the total of 49 structures entered on the FSA form cannot be correct; at most, 43 structures are shown on former CCC/USDA property west of the railroad (1959 and 1966 aerial photos).
2/21/2002	2002 aerial photo, Photo ID NAPP-12865-150A. The former CCC/USDA property is being used for temporary storage.

[a] For additional detail, see Table C.1, Appendix C, in the Powhattan site-specific *Work Plan* (Argonne 2007). All aerial photographs mentioned are in Appendix C of the *Work Plan* (Argonne 2007). Shaded transactions are illustrated in Figure E.1.

Draft Report: Results of the 2007 Investigation of Potential Contamination at the Former CCC/USDA Facility in Powhattan, Kansas

Applied Geosciences and Environmental Management Section,
Environmental Science Division,
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Contents:

February 2008

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Supplement 1:

Complete Analytical Data for Soil Samples

TABLE S1.1 Results of purge-and-trap analyses at the AGEM Laboratory for soil samples collected at Powhattan, Kansas.[a]

				Concentration (µg/kg)		
Location	Sample	Depth (ft BGL)	Sampling Date	Carbon Tetrachloride	Chloroform	Methylene Chloride
TI01	PHTI01-S-24070	2	7/10/07	ND[b]	ND	ND
TI01	PHTI01-S-24071	6	7/10/07	ND	ND	ND
TI01	PHTI01-S-24072	10	7/10/07	ND	2.3 J[c]	ND
TI01	PHTI01-S-24073	14	7/10/07	158	32	ND
TI01	PHTI01-S-24074	18	7/10/07	57	13	ND
TI01	PHTI01-S-24075	22	7/10/07	130	22	ND
TI01	PHTI01-S-24077	24.75	7/10/07	145	29	ND
TI01	PHTI01-S-24078	27	7/10/07	151	29	ND
TI01	PHTI01-S-24079	30.5	7/10/07	104	26	ND
TI01	PHTI01-S-24080	34	7/10/07	198	38	ND
TI01	PHTI01-S-24081	38	7/10/07	250	47	ND
TI01	PHTI01-S-24082	42	7/10/07	269	11	ND
TI01	PHTI01-S-24083	45.5	7/10/07	79	14	ND
TI01	PHTI01-S-24084	46.75	7/10/07	282	7.2 J	ND
TI01	PHTI01-S-24085	50	7/10/07	253	6.3 J	ND
TI01	PHTI01-S-24086	53	7/10/07	93	2.2 J	ND
TI01	PHTI01-S-24087	55	7/10/07	53	1.9 J	ND
TI01	PHTI01-S-24088	58	7/10/07	53	1.9 J	ND
TI02	PHTI02-S-24092	2	7/11/07	3.6 J	ND	ND
TI02	PHTI02-S-24093	6	7/11/07	6.8 J	ND	ND
TI02	PHTI02-S-24094	7.5	7/11/07	2.3 J	ND	ND
TI02	PHTI02-S-24095	10	7/11/07	ND	1.7 J	ND
TI02	PHTI02-S-24096	14	7/11/07	3.6 J	8.9 J	ND
TI02	PHTI02-S-24097	18	7/11/07	217	32	ND
TI02	PHTI02-S-24098	22	7/11/07	396	25	ND
TI02	PHTI02-S-24099	26	7/11/07	759	72	ND
TI02	PHTI02-S-24100	30	7/11/07	2140	61	ND
TI02	PHTI02-S-24101	34.5	7/11/07	1745	59	ND
TI02	PHTI02-S-24102	38	7/11/07	483	31	ND
TI02	PHTI02-S-24103	42	7/11/07	140	6.1 J	ND
TI02	PHTI02-S-24104	46	7/11/07	58	2.3 J	ND
TI02	PHTI02-S-24105	50	7/11/07	14	1.2 J	ND
TI02	PHTI02-S-24106	51	7/11/07	10	1.1 J	ND
TI02	PHTI02-S-24107	54	7/11/07	4.7 J	ND	ND
TI02	PHTI02-S-24109	57.5	7/11/07	4.7 J	ND	ND
TI02	PHTI02-S-24110	58.5	7/11/07	3.5 J	ND	ND
TI03	PHTI03-S-24111	2	7/11/07	ND	ND	ND
TI03	PHTI03-S-24112	6	7/11/07	ND	ND	ND
TI03	PHTI03-S-24113	10	7/11/07	ND	ND	ND

TABLE S1.1 (Cont.)

Location	Sample	Depth (ft BGL)	Sampling Date	Concentration (µg/kg) Carbon Tetrachloride	Chloroform	Methylene Chloride
TI03	PHTI03-S-24114	14	7/11/07	ND	ND	ND
TI03	PHTI03-S-24115	18	7/11/07	ND	ND	ND
TI03	PHTI03-S-24116	22	7/11/07	ND	ND	ND
TI03	PHTI03-S-24117	26	7/12/07	ND	ND	ND
TI03	PHTI03-S-24118	30	7/12/07	ND	ND	ND
TI03	PHTI03-S-24119	34	7/12/07	ND	ND	ND
TI03	PHTI03-S-24122	38	7/12/07	ND	ND	ND
TI03	PHTI03-S-24123	41.25	7/12/07	1.1 J	1.5 J	ND
TI03	PHTI03-S-24124	42.75	7/12/07	2.1 J	1.7 J	ND
TI03	PHTI03-S-24125	46	7/12/07	7.7 J	2.0 J	ND
TI03	PHTI03-S-24126	50	7/12/07	8.7 J	3.8 J	ND
TI03	PHTI03-S-24127	54	7/12/07	ND	ND	ND
TI03	PHTI03-S-24128	58	7/12/07	10	4.2 J	ND
TI04	PHTI04-S-24132	2	7/12/07	ND	ND	ND
TI04	PHTI04-S-24133	6	7/12/07	ND	ND	ND
TI04	PHTI04-S-24134	10	7/12/07	ND	ND	ND
TI04	PHTI04-S-24135	14	7/12/07	ND	ND	ND
TI04	PHTI04-S-24136	18	7/12/07	ND	ND	ND
TI04	PHTI04-S-24137	22	7/12/07	ND	ND	ND
TI04	PHTI04-S-24138	26	7/12/07	ND	ND	ND
TI04	PHTI04-S-24139	30	7/13/07	ND	ND	ND
TI04	PHTI04-S-24150	34	7/13/07	ND	ND	ND
TI04	PHTI04-S-24151	38	7/13/07	ND	ND	ND
TI04	PHTI04-S-24152	42	7/13/07	3.4 J	1.5 J	ND
TI04	PHTI04-S-24153	43.25	7/13/07	5.6 J	2.0 J	ND
TI04	PHTI04-S-24154	46	7/13/07	12	3.4 J	ND
TI04	PHTI04-S-24156	48.75	7/13/07	14	3.5 J	ND
TI04	PHTI04-S-24157	51.75	7/13/07	22	4.3 J	ND
TI05	PHTI05-S-24225	2	7/16/07	ND	ND	ND
TI05	PHTI05-S-24226	6	7/16/07	ND	ND	ND
TI05	PHTI05-S-24227	10	7/16/07	ND	ND	ND
TI05	PHTI05-S-24228	14	7/16/07	ND	ND	ND
TI05	PHTI05-S-24229	18	7/16/07	ND	ND	ND
TI05	PHTI05-S-24230	22	7/16/07	ND	ND	ND
TI05	PHTI05-S-24231	26	7/16/07	ND	ND	ND
TI05	PHTI05-S-24233	30	7/16/07	ND	ND	ND
TI05	PHTI05-S-24234	33.7	7/17/07	ND	ND	ND
TI05	PHTI05-S-24235	38.9	7/17/07	ND	ND	ND
TI05	PHTI05-S-24236	41.8	7/17/07	ND	ND	ND
TI05	PHTI05-S-24237	46	7/17/07	ND	ND	ND

TABLE S1.1 (Cont.)

				Concentration (µg/kg)		
Location	Sample	Depth (ft BGL)	Sampling Date	Carbon Tetrachloride	Chloroform	Methylene Chloride
TI05	PHTI05-S-24238	50	7/17/07	ND	ND	ND
TI05	PHTI05-S-24239	53.7	7/17/07	ND	ND	ND
TI05	PHTI05-S-24142	55.1	7/17/07	ND	ND	ND
TI06	PHTI06-S-24178	2	7/15/07	ND	ND	ND
TI06	PHTI06-S-24179	6	7/15/07	ND	ND	ND
TI06	PHTI06-S-24180	10	7/15/07	ND	ND	ND
TI06	PHTI06-S-24181	14	7/15/07	ND	ND	ND
TI06	PHTI06-S-24182	18	7/15/07	ND	ND	ND
TI06	PHTI06-S-24183	22	7/15/07	ND	ND	ND
TI06	PHTI06-S-24184	26	7/15/07	ND	ND	ND
TI06	PHTI06-S-24186	30	7/15/07	ND	ND	ND
TI06	PHTI06-S-24187	34	7/15/07	ND	ND	ND
TI06	PHTI06-S-24188	37.5	7/15/07	ND	ND	ND
TI06	PHTI06-S-24189	41.2	7/15/07	ND	ND	ND
TI06	PHTI06-S-24190	43	7/15/07	ND	ND	ND
TI06	PHTI06-S-24191	46	7/15/07	ND	ND	ND
TI06	PHTI06-S-24192	50	7/15/07	ND	ND	ND
TI06	PHTI06-S-24193	51.2	7/15/07	ND	ND	ND
TI06	PHTI06-S-24194	55.2	7/15/07	ND	ND	ND
TI07	PHTI07-S-24357	2	7/31/07	ND	ND	ND
TI07	PHTI07-S-24358	6	7/31/07	ND	ND	ND
TI07	PHTI07-S-24359	10	7/31/07	ND	ND	ND
TI07	PHTI07-S-24257	14	7/31/07	ND	ND	ND
TI07	PHTI07-S-24258	18	7/31/07	ND	ND	ND
TI07	PHTI07-S-24259	22	7/31/07	ND	ND	ND
TI07	PHTI07-S-24660	26	7/31/07	ND	ND	ND
TI07	PHTI07-S-24661	30	7/31/07	ND	ND	ND
TI07	PHTI07-S-24662	34	7/31/07	ND	ND	ND
TI07	PHTI07-S-24664	38	7/31/07	ND	ND	ND
TI07	PHTI07-S-24665	42	7/31/07	ND	ND	ND
TI07	PHTI07-S-24666	46	7/31/07	ND	ND	ND
TI07	PHTI07-S-24667	50	7/31/07	ND	ND	ND
TI07	PHTI07-S-24668	54	7/31/07	ND	ND	ND
TI08	PHTI08-S-24319	1.5	7/28/07	ND	ND	ND
TI08	PHTI08-S-24320	6	7/28/07	ND	ND	ND
TI08	PHTI08-S-24321	9	7/28/07	ND	ND	ND
TI08	PHTI08-S-24322	14	7/28/07	ND	ND	ND
TI08	PHTI08-S-24323	18	7/28/07	ND	ND	ND
TI08	PHTI08-S-24324	22	7/29/07	ND	ND	ND

TABLE S1.1 (Cont.)

				Concentration (µg/kg)		
Location	Sample	Depth (ft BGL)	Sampling Date	Carbon Tetrachloride	Chloroform	Methylene Chloride
TI08	PHTI08-S-24325	26	7/29/07	ND	ND	ND
TI08	PHTI08-S-24326	30	7/29/07	ND	ND	ND
TI08	PHTI08-S-24327	33	7/29/07	ND	ND	ND
TI08	PHTI08-S-24328	38	7/29/07	ND	ND	ND
TI08	PHTI08-S-24329	42	7/29/07	ND	ND	ND
TI08	PHTI08-S-24330	46	7/29/07	ND	ND	ND
TI08	PHTI08-S-24331	50	7/29/07	ND	ND	ND
TI08	PHTI08-S-24333	54	7/29/07	ND	ND	ND
TI09	PHTI09-S-24197	2	7/15/07	ND	ND	ND
TI09	PHTI09-S-24198	6	7/15/07	ND	ND	ND
TI09	PHTI09-S-24199	10	7/15/07	ND	ND	ND
TI09	PHTI09-S-24200	14	7/15/07	ND	ND	ND
TI09	PHTI09-S-24201	18	7/15/07	ND	ND	ND
TI09	PHTI09-S-24203	22	7/16/07	ND	ND	ND
TI09	PHTI09-S-24204	26	7/16/07	ND	ND	ND
TI09	PHTI09-S-24205	29.2	7/16/07	ND	ND	ND
TI09	PHTI09-S-24206	31	7/16/07	ND	ND	ND
TI09	PHTI09-S-24207	34	7/16/07	ND	ND	ND
TI09	PHTI09-S-24208	38	7/16/07	ND	ND	ND
TI09	PHTI09-S-24209	41.5	7/16/07	ND	ND	ND
TI09	PHTI09-S-24213	46	7/16/07	ND	ND	ND
TI09	PHTI09-S-24214	49	7/16/07	ND	ND	ND
TI09	PHTI09-S-24215	51	7/16/07	ND	ND	ND
TI09	PHTI09-S-24216	53.3	7/16/07	ND	ND	ND
TI09	PHTI09-S-24217	55.3	7/16/07	ND	ND	ND
TI10	PHTI10-S-24271	2	7/27/07	7.7 J	ND	ND
TI10	PHTI10-S-24272	6	7/27/07	ND	ND	ND
TI10	PHTI10-S-24273	10	7/27/07	ND	ND	ND
TI10	PHTI10-S-24274	14	7/27/07	ND	ND	ND
TI10	PHTI10-S-24275	18	7/27/07	ND	ND	ND
TI10	PHTI10-S-24276	22	7/27/07	ND	ND	ND
TI10	PHTI10-S-24277	26	7/27/07	ND	ND	ND
TI10	PHTI10-S-24278	30	7/27/07	ND	ND	ND
TI10	PHTI10-S-24279	34	7/27/07	29	1.9 J	ND
TI10	PHTI10-S-24167	38	7/27/07	68	5.0 J	ND
TI10	PHTI10-S-24168	42	7/27/07	6.3 J	2.0 J	ND
TI10	PHTI10-S-24300	46	7/27/07	39	2.5 J	ND
TI10	PHTI10-S-24301	50	7/27/07	8.5 J	ND	ND

TABLE S1.1 (Cont.)

				Concentration (µg/kg)		
Location	Sample	Depth (ft BGL)	Sampling Date	Carbon Tetrachloride	Chloroform	Methylene Chloride
TI11	PHTI11-S-24242	1.5	7/26/07	ND	ND	ND
TI11	PHTI11-S-24243	6	7/26/07	ND	ND	ND
TI11	PHTI11-S-24244	10	7/26/07	ND	ND	ND
TI11	PHTI11-S-24245	14	7/26/07	ND	ND	ND
TI11	PHTI11-S-24246	18	7/26/07	ND	ND	ND
TI11	PHTI11-S-24247	22	7/26/07	ND	ND	ND
TI11	PHTI11-S-24248	26	7/26/07	ND	ND	ND
TI11	PHTI11-S-24262	30	7/26/07	ND	ND	ND
TI11	PHTI11-S-24263	34	7/26/07	ND	ND	ND
TI11	PHTI11-S-24264	38	7/26/07	ND	ND	ND
TI11	PHTI11-S-24265	42	7/26/07	ND	ND	ND
TI11	PHTI11-S-24266	46	7/26/07	6.5 J	1.0 J	ND
TI11	PHTI11-S-24267	50	7/26/07	5.7 J	4.7 J	ND
TI11	PHTI11-S-24268	54	7/26/07	1.0 J	ND	ND
TI12	PHTI12-S-24305	1.4	7/27/07	ND	ND	ND
TI12	PHTI12-S-24306	6	7/28/07	ND	ND	ND
TI12	PHTI12-S-24307	10	7/28/07	ND	ND	ND
TI12	PHTI12-S-24308	14	7/28/07	ND	ND	ND
TI12	PHTI12-S-24309	18	7/28/07	ND	ND	ND
TI12	PHTI12-S-24310	22	7/28/07	ND	ND	ND
TI12	PHTI12-S-24311	26	7/28/07	ND	ND	ND
TI12	PHTI12-S-24312	30	7/28/07	ND	ND	ND
TI12	PHTI12-S-24313	34	7/28/07	ND	ND	ND
TI12	PHTI12-S-24314	38	7/28/07	ND	ND	ND
TI12	PHTI12-S-24315	42	7/28/07	ND	ND	ND
TI12	PHTI12-S-24316	46	7/28/07	ND	ND	ND
TI18	PHTI18-S-24334	2	7/29/07	ND	ND	ND
TI18	PHTI18-S-24335	6	7/29/07	ND	ND	ND
TI18	PHTI18-S-24336	10	7/29/07	ND	ND	ND
TI18	PHTI18-S-24337	14	7/29/07	ND	ND	ND
TI18	PHTI18-S-24338	18	7/29/07	ND	ND	ND
TI18	PHTI18-S-24339	21.5	7/29/07	ND	ND	ND
TI18	PHTI18-S-24340	26	7/29/07	ND	ND	ND
TI18	PHTI18-S-24341	30	7/29/07	ND	ND	ND
TI18	PHTI18-S-24342	34	7/30/07	ND	ND	ND
TI18	PHTI18-S-24343	38	7/30/07	ND	ND	ND
TI18	PHTI18-S-24345	42	7/30/07	13	ND	ND
TI18	PHTI18-S-24346	46	7/30/07	112	11	ND

TABLE S1.1 (Cont.)

Location	Sample	Depth (ft BGL)	Sampling Date	Concentration (µg/kg) Carbon Tetrachloride	Chloroform	Methylene Chloride
TI18	PHTI18-S-24347	50	7/30/07	10	ND	ND
TI18	PHTI18-S-24348	54	7/30/07	ND	ND	ND

[a] 1,2-Dichloroethane and ethylene dibromide were not detected in any sample.

[b] ND, not detected at an instrument detection limit of 1.0 µg/kg.

[c] Qualifier J indicates an estimated concentration below the purge-and-trap method quantitation limit of 10 µg/kg.

TABLE S1.2 Results of particle size analysis for subsurface soil samples collected during the 2007 Investigation at Powhattan, Kansas.

Location	Depth (ft BGL)	Fraction Passing through Indicated Sieve Size (%)																Composition (%)			
		1"	0.75"	0.5"	3/8"	#4	#10	#18	#35	#40	#60	#100	#120	#140	#200	#230	#270	Gravel	Sand	Silt	Clay
TI01	38	100	100	100	100	100	100	100	99.8	99.8	99.4	99.0	98.8	98.7	98.3	97.8	96.9	0.0	1.7	47.0	51.3
TI01	42	100	100	100	100	100	100	100	99.7	99.6	99.0	98.2	98.0	97.8	97.4	96.9	96.3	0.0	2.6	44.5	52.9
TI01	46.75	100	100	100	100	100	100	99.9	99.5	99.3	98.2	96.7	96.4	96.1	95.2	94.5	93.8	0.0	4.8	37.6	57.6
TI02	22	100	100	100	100	100	100	100	99.8	99.8	99.6	99.5	99.4	99.4	99.2	98.8	98.3	0.0	0.8	48.4	50.8
TI02	26	100	100	100	100	100	100	100	99.8	99.8	99.6	99.3	99.3	99.2	98.9	98.4	97.7	0.0	1.1	49.3	49.6
TI02	38	100	94.7	86.5	86.5	86.5	86.5	86.5	86.3	86.3	86.0	85.7	85.6	85.5	85.2	84.7	84.0	13.5	1.3	40.5	44.7

Supplement 2:

Field Measurements for Groundwater Samples

TABLE S2.1 Field measurements made prior to collection of groundwater samples during the 2007 investigation at Powhattan, Kansas.

Location	Sample	Depth (ft)	Sampling Date	Temperature (°C)	pH	Conductivity (µS/cm)
Cone penetrometer sampling locations						
TI01	PHTI01-W-24060	59.5-64.5	7/9/07	19.5	7.16	2690
TI02	PHTI02-W-24220	54-59	7/16/07	NR[a]	NR	NR
TI02	PHTI02-W-24061	58.75-63.75	7/9/07	19.8	7.19	1469
TI03	PHTI03-W-24171	55-60	7/14/07	17.9	7.21	1380
TI03	PHTI03-W-24063	60.75-65.75	7/9/07	NR	NR	NR
TI04	PHTI04-W-24210	42-47	7/14/07	NR	NR	NR
TI04	PHTI04-W-24211	49-54	7/14/07	NR	NR	NR
TI04	PHTI04-W-24158	55-60	7/13/07	16.4	7.25	1445
TI04	PHTI04-W-24130	60.4-65.4	7/12/07	19.8	7.21	1491
TI05	PHTI05-W-24240	53-58	7/18/07	NR	NR	NR
TI05	PHTI05-W-24224	59-64	7/16/07	19.2	7.13	1119
TI06	PHTI06-W-24221	57.5-62.5	7/16/07	NR	NR	NR
TI07	PHTI07-W-24296	56.14-61.14	7/29/07	18.0	7.53	1078
TI08	PHTI08-W-24294	56-61	7/28/07	18.3	7.47	902
TI09	PHTI09-W-24195	57.6-62.6	7/15/07	19.4	7.33	1248
TI10	PHTI10-W-24304	54.9-59.9	7/27/07	17.4	7.12	1658
TI11	PHTI11-W-24270	51.5-56.5	7/26/07	18.6	NR	NR
TI12	PHTI12-W-24688	53.6-58.6	8/2/07	24.8	7.62	890
TI13	PHTI13-W-24149	55.1-60.1	7/18/07	NR	NR	NR
TI13	PHTI13-W-24144	61.1-66.1	7/17/07	18.5	7.48	1018
TI14	PHTI14-W-24147	58-63	7/17/07	21.3	7.23	1326
TI14	PHTI14-W-24146	63.6-68.6	7/17/07	19.2	7.41	1372
TI15	PHTI15-W-24148	62.9-67.9	7/18/07	18.1	7.39	1312
TI16	PHTI16-W-24176	61.5-66.5	7/14/07	19.8	7.34	862
TI17	PHTI17-W-24177	58-63	7/15/07	NR	NR	NR
TI18	PHTI18-W-24172	57.3-62.3	7/14/07	17.7	7.34	1398
TI19	PHTI19-W-24241	61.1-66.1	7/18/07	18.8	7.29	1495
TI20	PHTI20-W-24251	57.24-63.24	7/29/07	15.6	7.47	855
TI21	PHTI21-W-24253	60.8-65.8	7/29/07	14.8	7.24	1370
TI22	PHTI22-W-24280	62-67	7/26/07	18.6	7.19	1087
TI23	PHTI23-W-24281	60.5-65.5	7/26/07	20.7	7.42	1074
TI24	PHTI24-W-24350	68.58-73.58	7/30/07	17.2	7.46	1186
TI25	PHTI25-W-24291	60-65	7/27/07	17.2	7.28	1032
TI26	PHTI26-W-24293	55.8-60.8	7/28/07	17.1	7.38	1271
TI27	PHTI27-W-24283	54.7-59.7	7/26/07	21.4	7.40	1455
TI28	PHTI28-W-24285	54-59	7/26/07	23.2	7.53	1031
TI29	PHTI29-W-24289	50.2-55.2	7/27/07	20.0	7.38	1308
TI30	PHTI30-W-24298	52-57	7/28/07	16.8	7.70	855
TI31	PHTI31-W-24287	52-57	7/27/07	20.0	7.31	1236
TI32	PHTI32-W-24297	54.5-59.5	7/29/07	16.4	7.51	1017
TI33	PHTI33-W-24254	60.6-65.6	7/29/07	17.4	7.13	1894
TI34	PHTI34-W-24353	62.26-67.26	7/30/07	18.2	7.48	1049
TI35	PHTI35-W-24684	65-70	8/1/07	19.2	7.52	1140
TI36	PHTI36-W-24349	57.7-62.7	7/30/07	15.8	7.43	742

TABLE S2.1 (Cont.)

Location	Sample	Depth (ft)	Sampling Date	Temperature (°C)	pH	Conductivity (µS/cm)
Cone penetrometer sampling locations (cont.)						
TI37	PHTI37-W-24256	53.7-58.7	7/31/07	13.6	7.55	1049
TI38	PHTI38-W-24352	55.2-60.2	7/30/07	17.2	7.40	952
TI39	PHTI39-W-24691	53.5-58.5	8/3/07	17.3	7.33	1057
TI40	PHTI40-W-24671	50.89-55.89	8/22/07	11.7	6.91	1321
TI41	PHTI41-W-24695	63.56-68.56	8/3/07	20.2	7.60	936
TI42	PHTI42-W-24694	63.71-68.71	8/3/07	21.4	7.19	1812
TI43	PHTI43-W-24680	59-64	8/1/07	19.1	7.16	2590
TI44	PHTI44-W-24685	59.1-64.1	8/2/07	15.4	7.28	1109
TI45	PHTI45-W-24690	61.3-66.3	8/2/07	17.4	7.25	880
Existing KDHE monitoring wells						
KDHEP1	PHKDHEP1-W-24065	55.1-65.1	7/9/07	17.9	7.31	1920
KDHEP2	PHKDHEP2-W-24165	58.1-68.1	7/14/07	16.3	7.35	1745
KDHEP3	PHKDHEP3-W-24069	52-62	7/13/07	15.6	7.44	1264
MW4	PHMW4-W-24162	54.7-64.7	7/13/07	16.9	7.49	1187
MW5	PHMW5-W-24160	58-68	7/13/07	15.5	7.53	849
MW6	PHMW6-W-24164	56-66	7/14/07	19.8	7.09	1216
MW7	PHMW7-W-24068	46-56	7/13/07	15.6	7.65	782
MW8	PHMW8-W-24066	55-65	7/9/07	16.3	7.34	1401
MW9	PHMW9-W-24067	52-62	7/9/07	16.6	7.41	1268
MW10	PHMW10-W-24064	56-62	7/9/07	15.8	7.54	724
New monitoring wells						
MW11	PHMW11-W-24676	55.5-65.5	8/23/07	11.9	7.09	1613
MW12	PHMW12-W-24677	50.3-60.3	8/23/07	12.8	7.20	1861
MW13	PHMW13-W-24674	51.8-61.8	8/22/07	14.4	6.89	1029
MW14	PHMW14-W-24670	52-62	8/22/07	11.8	6.63	1208
MW15	PHMW15-W-24672	59-69	8/22/07	11.8	7.14	1472
MW16	PHMW16-W-24675	57-67	8/22/07	13.4	7.20	1110
MW17	PHMW17-W-24673	52-62	8/22/07	13.2	6.88	1453
Private wells						
Kickapoo	PHKICKAPOO-W-24701	Unknown	8/23/07	NR	NR	NR
Schuetz, B.	PHSCHUETZ-W-24700	Unknown	8/23/07	NR	NR	NR
Smith, L.	PHSMITH-W-24678	Unknown	8/23/07	NR	NR	NR

[a] NR, not recorded.

Supplement 3:

Groundwater Level Data

TABLE S3.1 Hand-measured water levels at Powhattan, Kansas, September 2005-February 2008.

Well	Reference Elevation (ft AMSL)		9/13/2005			10/17/2005			2/24/2006			6/28/2006			1/10/2007		
	KDHE 2006	Argonne 2007	Time	Depth (ft TOC)	Elevation (ft AMSL)	Time	Depth (ft TOC)	Elevation (ft AMSL)	Time	Depth (ft TOC)	Elevation (ft AMSL)	Time	Depth (ft TOC)	Elevation (ft AMSL)	Time	Depth (ft TOC)	Elevation (ft AMSL)
KDHEP-1	1208.67	1208.369	11:24	11.29	1197.08	13:09	12.23	1196.14	11:13	15.01	1193.36	17:51	10.45	1197.92	10:49	16.11	1192.26
KDHEP-2	1209.15	1209.630	9:48	12.02	1197.61	12:26	12.93	1196.70	11:38	15.72	1193.91	18:18	10.76	1198.87	11:03	17.09	1192.54
KDHEP-3	1204.41	1205.193	17:51	10.36	1194.83	14:44	11.04	1194.15	10:23	13.06	1192.13	10:33	8.86	1196.33	11:43	13.88	1191.31
MW4	1207.99	1208.857	12:25	12.21	1196.65	14:00	12.96	1195.90	12:06	15.36	1193.50	19:02	10.88	1197.98	9:51	16.74	1192.12
MW5	1208.32	1208.572	11:54	10.91	1197.66	14:15	11.91	1196.66	11:48	14.76	1193.81	18:40	9.20	1199.37	11:18	16.34	1192.23
MW6	1206.49	1206.868	14:29	9.75	1197.12	13:21	10.91	1195.96	12:17	13.29	1193.58	11:58	9.28	1197.59	10:02	14.41	1192.46
MW7	1203.85	1204.675	15:16	7.36	1197.32	13:48	8.24	1196.44	10:40	11.32	1193.36	11:03	5.69	1198.99			1204.68
MW8	1210.99	1211.442	10:27	13.26	1198.18	12:48	14.47	1196.97	11:30	17.40	1194.04	18:09	12.26	1199.18	10:56	18.72	1192.72
MW9	1203.82	1204.419	14:42	6.89	1197.53	13:36	7.68	1196.74	12:31	10.40	1194.02	11:32	5.91	1198.51	10:19	11.18	1193.24
MW10	1207.31	1208.026	15:52	10.73	1197.30	14:31	11.65	1196.38	10:58	14.21	1193.82	17:22	9.93	1198.10	11:30	15.36	1192.67
MW11		1208.184															
MW12		1206.846															
MW13		1207.611															
MW14		1203.084															
MW15		1208.781															
MW16		1207.311															
MW17		1207.546															
TI07		1207.998															
TI08		1208.477															
TI10		1208.366															
TI12																	
TI18																	
TI20																	
T121		1208.945															
TI24																	
T125		1208.172															
T126		1204.996															
T129		1202.291															
T130		1204.689															
T131		1204.687															
T132		1206.887															
TI34																	
TI35																	
TI36																	
TI37																	
TI38																	

TABLE S3.1 (Cont.)

	Reference Elevation (ft AMSL)		7/9-10/2007		7/11/2007			7/29/2007		8/3/2007		1/4-7/2008			2/8/2008		
	KDHE 2006	Argonne 2007	Depth (ft TOC)	Elevation (ft AMSL)	Time	Depth (ft TOC)	Elevation (ft AMSL)	Depth (ft TOC)	Elevation (ft AMSL)	Depth (ft TOC)	Elevation (ft AMSL)	Time	Depth (ft TOC)	Elevation (ft AMSL)	Time	Depth (ft TOC)	Elevation (ft AMSL)
KDHEP-1	1208.67	1208.369	10.92	1197.45	14:02	10.74	1197.63	11.90	1196.47	12.00	1196.37	13:48	7.07	1201.30	15:16	7.18	1201.19
KDHEP-2	1209.15	1209.630	12.12	1197.51	12:46	11.33	1198.30	12.69	1196.94	12.70	1196.93	12:39	7.27	1202.36	17:03	7.43	1202.20
KDHEP-3	1204.41	1205.193	9.61	1195.58	13:35	9.00	1196.19	10.13	1195.06	10.01	1195.18	16:22	4.73	1200.46	12:01	4.89	1200.30
MW4	1207.99	1208.857	12.48	1196.38	12:24	11.52	1197.34	12.94	1195.92	13.00	1195.86	12:03	7.48	1201.38	17:31	7.67	1201.19
MW5	1208.32	1208.572	10.80	1197.77	13:07	9.91	1198.66	11.98	1196.59	11.49	1197.08	12:17	5.72	1202.85	16:50	6.00	1202.57
MW6	1206.49	1206.868	10.29	1196.58	11:58	9.69	1197.18	10.80	1196.07	10.66	1196.21	13:01	5.94	1200.93	16:38	6.08	1200.79
MW7	1203.85	1204.675	6.61	1198.07	11:05	5.84	1198.84	6.95	1197.73	6.80	1197.88	15:50	1.93	1202.75	12:41	2.36	1202.32
MW8	1210.99	1211.442	12.90	1198.54	13:34	12.64	1198.80	14.30	1197.14	14.10	1197.34	15:58[a]	8.32	1203.12	14:32	8.69	1202.75
MW9	1203.82	1204.419	6.50	1197.92	11:35	6.22	1198.20	7.33	1197.09	7.15	1197.27	14:26	2.58	1201.84	16:01	2.91	1201.51
MW10	1207.31	1208.026	10.15	1197.88	13:41	10.12	1197.91	11.57	1196.46	11.50	1196.53	16:07	6.09	1201.94	13:42	6.23	1201.80
MW11		1208.184										14:28[a]	5.68	1202.50	14:48	5.97	1202.21
MW12		1206.846										13:29[a]	5.09	1201.76	13:21	5.46	1201.39
MW13		1207.611										15:28	5.57	1202.04	12:19	5.87	1201.74
MW14		1203.084										17:08	4.74	1198.34	14:17	4.74	1198.34
MW15		1208.781										16:45	6.99	1201.79	14:00	7.03	1201.75
MW16		1207.311										15:24[a]	5.88	1201.43	17:21	6.29	1201.02
MW17		1207.546										15:09	5.46	1202.09	16:19	5.68	1201.87
TI07		1207.998															
TI08		1208.477						11.33	1197.15	11.18	1197.30						
TI10		1208.366						12.57	1195.80	12.35	1196.02						
TI12										12.96							
TI18										11.56							
TI20										11.62							
T121		1208.945						12.68	1196.27	12.5	1196.45						
TI24										13.52							
T125		1208.172						12.32	1195.85	12.45	1195.72						
T126		1204.996						8.55	1196.45	9.48	1195.52						
T129		1202.291						7.60	1194.69	7.05	1195.24						
T130		1204.689															
T131		1204.687						8.52	1196.17	8.48	1196.21						
T132		1206.887								11.00	1195.89						
TI34										12.54							
TI35										13.63							
TI36										11.17							
TI37										9.90							
TI38										10.60							

[a] Measured on 1/7/2008.

TABLE S3.2 Automatically measured water levels at Powhattan, Kansas, in January 2007-February 2008.

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
1/1/2007	0:00	16.36	13.993	11.772	15.534	17.381	16.83	16.576	14.88		11.4							
1/1/2007	4:00	16.336	13.97	11.749	15.507	17.363	16.809	16.564	14.857		11.367							
1/1/2007	8:00	16.315	13.953	11.733	15.489	17.352	16.793	16.559	14.835		11.339							
1/1/2007	12:00	16.309	13.943	11.72	15.476	17.343	16.776	16.554	14.818		11.315							
1/1/2007	16:00	16.28	13.932	11.712	15.46	17.322	16.757	16.547	14.797		11.302							
1/1/2007	20:00	16.26	13.92	11.704	15.444	17.307	16.742	16.538	14.782		11.27							
1/2/2007	0:00	16.24	13.91	11.698	15.431	17.291	16.728	16.528	14.763		11.25							
1/2/2007	4:00	16.22	13.897	11.688	15.409	17.269	16.709	16.511	14.739		11.229							
1/2/2007	8:00	16.197	13.883	11.675	15.392	17.248	16.688	16.497	14.717		11.209							
1/2/2007	12:00	16.189	13.874	11.665	15.378	17.232	16.673	16.481	14.69		11.189							
1/2/2007	16:00	16.162	13.862	11.657	15.361	17.205	16.654	16.459	14.679		11.17							
1/2/2007	20:00	16.142	13.85	11.649	15.343	17.181	16.631	16.442	14.662		11.158							
1/3/2007	0:00	16.123	13.843	11.643	15.333	17.163	16.616	16.428	14.645		11.148							
1/3/2007	4:00	16.103	13.831	11.632	15.314	17.142	16.593	16.409	14.623		11.132							
1/3/2007	8:00	16.079	13.816	11.622	15.298	17.116	16.572	16.389	14.6		11.117							
1/3/2007	12:00	16.075	13.806	11.616	15.29	17.104	16.558	16.373	14.578		11.109							
1/3/2007	16:00	16.054	13.794	11.606	15.275	17.07	16.53	16.354	14.561		11.091							
1/3/2007	20:00	16.042	13.785	11.6	15.265	17.055	16.514	16.339	14.548		11.085							
1/4/2007	0:00	16.026	13.775	11.593	15.257	17.039	16.497	16.32	14.531		11.077							
1/4/2007	4:00	16.007	13.765	11.585	15.242	17.02	16.478	16.303	14.514		11.067							
1/4/2007	8:00	15.986	13.754	11.577	15.224	16.999	16.457	16.286	14.495		11.057							
1/4/2007	12:00	15.938	13.746	11.571	15.222	16.987	16.44	16.272	14.473		11.046							
1/4/2007	16:00	15.979	13.735	11.565	15.218	16.956	16.413	16.256	14.458		11.038							
1/4/2007	20:00	15.968	13.729	11.559	15.211	16.953	16.4	16.246	14.45		11.034							
1/5/2007	0:00	15.958	13.727	11.561	15.207	16.954	16.392	16.244	14.441		11.032							
1/5/2007	4:00	15.946	13.721	11.561	15.199	16.947	16.381	16.236	14.433		11.028							
1/5/2007	8:00	15.935	13.717	11.559	15.187	16.942	16.369	16.227	14.422		11.02							
1/5/2007	12:00	15.946	13.715	11.561	15.191	16.943	16.367	16.227	14.411		11.016							
1/5/2007	16:00	15.901	13.715	11.563	15.195	16.935	16.356	16.227	14.409		11.016							
1/5/2007	20:00	15.946	13.717	11.569	15.199	16.943	16.352	16.232	14.413		11.02							
1/6/2007	0:00	15.946	13.721	11.579	15.199	16.954	16.352	16.241	14.411		11.026							
1/6/2007	4:00	15.941	13.727	11.587	15.197	16.959	16.35	16.246	14.411		11.03							
1/6/2007	8:00	15.94	13.729	11.591	15.197	16.961	16.346	16.251	14.409		11.03							
1/6/2007	12:00	15.946	13.735	11.6	15.195	16.963	16.348	16.256	14.407		11.034							
1/6/2007	16:00	15.933	13.735	11.604	15.191	16.95	16.341	16.248	14.407		11.032							
1/6/2007	20:00	15.932	13.736	11.61	15.187	16.953	16.339	16.248	14.409		11.038							
1/7/2007	0:00	15.932	13.738	11.614	15.187	16.951	16.339	16.248	14.411		11.042							
1/7/2007	4:00	15.929	13.742	11.618	15.185	16.95	16.337	16.246	14.411		11.044							
1/7/2007	8:00	15.926	13.742	11.62	15.181	16.945	16.335	16.244	14.409		11.046							
1/7/2007	12:00	15.93	13.746	11.626	15.185	16.955	16.337	16.251	14.407		11.052							
1/7/2007	16:00	15.929	13.754	11.632	15.187	16.955	16.339	16.253	14.409		11.055							
1/7/2007	20:00	15.927	13.754	11.639	15.185	16.961	16.337	16.258	14.418		11.063							
1/8/2007	0:00	15.93	13.754	11.643	15.187	16.961	16.337	16.26	14.422		11.065							
1/8/2007	4:00	15.929	13.756	11.647	15.187	16.955	16.337	16.256	14.42		11.068							
1/8/2007	8:00	15.925	13.754	11.647	15.179	16.943	16.333	16.246	14.417		11.069							
1/8/2007	12:00	15.934	13.76	11.651	15.183	16.948	16.331	16.248	14.413		11.073							
1/8/2007	16:00	15.931	13.762	11.655	15.191	16.95	16.333	16.256	14.413		11.077							
1/8/2007	20:00	15.946	13.769	11.663	15.199	16.964	16.335	16.268	14.426		11.087							
1/9/2007	0:00	15.956	13.775	11.673	15.207	16.985	16.344	16.282	14.432		11.097							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
1/9/2007	4:00	15.964	13.785	11.686	15.216	17.001	16.354	16.299	14.441		11.107							
1/9/2007	8:00	15.975	13.794	11.698	15.224	17.017	16.36	16.313	14.454		11.117							
1/9/2007	12:00	15.987	13.806	11.712	15.236	17.035	16.375	16.33	14.456		11.124							
1/9/2007	16:00	15.997	13.814	11.72	15.242	17.033	16.373	16.337	14.467		11.13							
1/9/2007	20:00	16.001	13.818	11.729	15.244	17.035	16.377	16.339	14.482		11.138							
1/10/2007	0:00	16.001	13.821	11.735	15.248	17.033	16.381	16.337	14.488		11.144							
1/10/2007	4:00	15.999	13.823	11.739	15.244	17.022	16.383	16.33	14.488		11.148							
1/10/2007	8:00	15.995	13.821	11.739	15.242	17.012	16.383	16.323	14.49		11.15							
1/10/2007	12:00	16.005	13.821	11.739	15.244	17.011	16.362	16.311	14.505		11.15							
1/10/2007	16:00	15.993	13.823	11.737	15.259	17.083	16.369	16.306	14.522		11.152							
1/10/2007	20:00	16.003	13.827	11.739	15.257	17.083	16.369	16.303	14.531		11.16							
1/11/2007	0:00	15.999	13.825	11.741	15.259	17.089	16.365	16.303	14.533		11.162							
1/11/2007	4:00	16.001	13.825	11.743	15.261	17.083	16.365	16.301	14.531		11.164							
1/11/2007	8:00	15.999	13.825	11.745	15.261	17.078	16.362	16.301	14.531		11.166							
1/11/2007	12:00	15.993	13.827	11.747	15.269	17.081	16.36	16.301	14.527		11.168							
1/11/2007	16:00	16.015	13.829	11.751	15.279	17.081	16.362	16.301	14.529		11.176							
1/11/2007	20:00	16.042	13.839	11.765	15.298	17.115	16.379	16.325	14.546		11.193							
1/12/2007	0:00	16.052	13.85	11.78	15.312	17.142	16.388	16.347	14.557		11.207							
1/12/2007	4:00	16.062	13.86	11.792	15.322	17.163	16.398	16.366	14.567		11.217							
1/12/2007	8:00	16.073	13.874	11.808	15.329	17.177	16.413	16.385	14.578		11.227							
1/12/2007	12:00	16.081	13.885	11.823	15.347	17.195	16.421	16.406	14.589		11.235							
1/12/2007	16:00	16.105	13.893	11.837	15.359	17.201	16.43	16.414	14.6		11.247							
1/12/2007	20:00	16.111	13.901	11.843	15.363	17.209	16.436	16.423	14.606		11.256							
1/13/2007	0:00	16.118	13.912	11.855	15.372	17.219	16.446	16.435	14.617		11.264							
1/13/2007	4:00	16.124	13.92	11.866	15.376	17.227	16.455	16.44	14.627		11.274							
1/13/2007	8:00	16.13	13.93	11.876	15.38	17.233	16.463	16.45	14.638		11.284							
1/13/2007	12:00	16.14	13.937	11.882	15.384	17.237	16.469	16.452	14.647		11.29							
1/13/2007	16:00	16.138	13.939	11.888	15.386	17.232	16.472	16.452	14.653		11.294							
1/13/2007	20:00	16.14	13.949	11.898	15.388	17.241	16.48	16.457	14.662		11.302							
1/14/2007	0:00	16.144	13.959	11.907	15.396	17.246	16.486	16.462	14.668		11.31							
1/14/2007	4:00	16.15	13.962	11.913	15.398	17.248	16.49	16.464	14.672		11.317							
1/14/2007	8:00	16.154	13.968	11.921	15.405	17.254	16.499	16.471	14.681		11.325							
1/14/2007	12:00	16.164	13.976	11.925	15.409	17.262	16.505	16.476	14.685		11.331							
1/14/2007	16:00	16.156	13.968	11.917	15.398	17.243	16.498	16.462	14.683		11.325							
1/14/2007	20:00	16.156	13.962	11.915	15.394	17.241	16.497	16.454	14.677		11.321							
1/15/2007	0:00	16.16	13.966	11.923	15.4	17.251	16.505	16.459	14.683		11.329							
1/15/2007	4:00	16.164	13.972	11.933	15.405	17.259	16.507	16.466	14.687		11.335							
1/15/2007	8:00	16.175	13.98	11.948	15.411	17.277	16.518	16.479	14.7		11.345							
1/15/2007	12:00	16.173	13.993	11.962	15.425	17.299	16.532	16.5	14.705		11.359							
1/15/2007	16:00	16.187	14.001	11.966	15.435	17.307	16.532	16.512	14.722		11.365							
1/15/2007	20:00	16.193	14.015	11.99	15.45	17.329	16.556	16.529	14.739		11.382							
1/16/2007	0:00	16.207	14.026	12.003	15.464	17.344	16.566	16.548	14.752		11.392							
1/16/2007	4:00	16.22	14.036	12.011	15.472	17.354	16.576	16.56	14.76		11.402							
1/16/2007	8:00	16.232	14.047	12.023	15.483	17.365	16.587	16.572	14.771		11.412							
1/16/2007	12:00	16.263	14.063	12.029	15.497	17.373	16.606	16.584	14.769		11.42							
1/16/2007	16:00	16.277	14.075	12.033	15.509	17.386	16.608	16.593	14.79		11.429							
1/16/2007	20:00	16.269	14.08	12.06	15.511	17.403	16.627	16.608	14.818		11.439							
1/17/2007	0:00	16.279	14.088	12.07	15.522	17.411	16.637	16.617	14.827		11.457							
1/17/2007	4:00	16.285	14.096	12.074	15.53	17.415	16.642	16.62	14.829		11.465							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
1/17/2007	8:00	16.289	14.102	12.081	15.534	17.411	16.646	16.617	14.833		11.469							
1/17/2007	12:00	16.316	14.111	12.078	15.55	17.402	16.664	16.612	14.831		11.475							
1/17/2007	16:00	16.328	14.115	12.078	15.563	17.39	16.664	16.608	14.846		11.482							
1/17/2007	20:00	16.34	14.119	12.091	15.577	17.395	16.671	16.608	14.859		11.498							
1/18/2007	0:00	16.328	14.123	12.101	15.583	17.402	16.675	16.61	14.865		11.506							
1/18/2007	4:00	16.328	14.125	12.107	15.581	17.405	16.675	16.608	14.872		11.51							
1/18/2007	8:00	16.34	14.129	12.111	15.583	17.415	16.684	16.612	14.876		11.522							
1/18/2007	12:00	16.365	14.142	12.119	15.604	17.435	16.69	16.624	14.876		11.536							
1/18/2007	16:00	16.375	14.15	12.134	15.62	17.45	16.7	16.641	14.889		11.549							
1/18/2007	20:00	16.391	14.156	12.15	15.635	17.48	16.719	16.665	14.906		11.563							
1/19/2007	0:00	16.395	14.167	12.171	15.649	17.501	16.728	16.682	14.923		11.577							
1/19/2007	4:00	16.399	14.177	12.181	15.655	17.509	16.734	16.691	14.932		11.587							
1/19/2007	8:00	16.405	14.183	12.185	15.659	17.511	16.74	16.696	14.936		11.591							
1/19/2007	12:00	16.454	14.2	12.187	15.678	17.519	16.755	16.701	14.934		11.597							
1/19/2007	16:00	16.457	14.208	12.193	15.694	17.522	16.77	16.708	14.97		11.605							
1/19/2007	20:00	16.465	14.21	12.207	15.696	17.536	16.776	16.718	14.977		11.618							
1/20/2007	0:00	16.463	14.219	12.226	15.707	17.552	16.784	16.732	14.99		11.63							
1/20/2007	4:00	16.467	14.227	12.234	15.711	17.555	16.791	16.734	15		11.642							
1/20/2007	8:00	16.469	14.235	12.24	15.715	17.557	16.795	16.737	15.003		11.648							
1/20/2007	12:00	16.503	14.245	12.238	15.717	17.549	16.805	16.737	15.003		11.654							
1/20/2007	16:00	16.499	14.25	12.244	15.721	17.546	16.812	16.739	15.022		11.658							
1/20/2007	20:00	16.485	14.245	12.244	15.713	17.543	16.807	16.73	15.018		11.656							
1/21/2007	0:00	16.467	14.233	12.238	15.705	17.523	16.797	16.715	15.007		11.648							
1/21/2007	4:00	16.452	14.225	12.232	15.688	17.51	16.786	16.696	14.998		11.64							
1/21/2007	8:00	16.446	14.221	12.232	15.684	17.51	16.782	16.692	14.992		11.638							
1/21/2007	12:00	16.457	14.231	12.242	15.69	17.526	16.792	16.706	14.994		11.646							
1/21/2007	16:00	16.463	14.239	12.254	15.702	17.546	16.803	16.72	15.005		11.656							
1/21/2007	20:00	16.473	14.248	12.267	15.709	17.565	16.814	16.737	15.013		11.664							
1/22/2007	0:00	16.489	14.26	12.281	15.721	17.587	16.828	16.759	15.024		11.679							
1/22/2007	4:00	16.501	14.272	12.295	15.735	17.603	16.838	16.776	15.037		11.689							
1/22/2007	8:00	16.51	14.279	12.306	15.744	17.613	16.849	16.788	15.045		11.699							
1/22/2007	12:00	16.524	14.291	12.316	15.754	17.624	16.859	16.8	15.054		11.701							
1/22/2007	16:00	16.538	14.302	12.326	15.764	17.629	16.868	16.806	15.067		11.703							
1/22/2007	20:00	16.53	14.306	12.334	15.764	17.645	16.879	16.814	15.078		11.713							
1/23/2007	0:00	16.53	14.31	12.345	15.772	17.651	16.885	16.818	15.086		11.725							
1/23/2007	4:00	16.534	14.32	12.353	15.781	17.651	16.891	16.826	15.093		11.735							
1/23/2007	8:00	16.542	14.328	12.359	15.785	17.656	16.898	16.831	15.099		11.742							
1/23/2007	12:00	16.595	14.341	12.369	15.797	17.653	16.91	16.837	15.086		11.754							
1/23/2007	16:00	16.597	14.353	12.375	15.807	17.671	16.927	16.843	15.129		11.766							
1/23/2007	20:00	16.602	14.36	12.387	15.815	17.689	16.94	16.859	15.138		11.776							
1/24/2007	0:00	16.608	14.37	12.398	15.826	17.705	16.948	16.871	15.146		11.784							
1/24/2007	4:00	16.618	14.38	12.41	15.836	17.717	16.959	16.888	15.151		11.796							
1/24/2007	8:00	16.614	14.386	12.42	15.838	17.728	16.969	16.9	15.159		11.802							
1/24/2007	12:00	16.636	14.401	12.433	15.855	17.748	16.986	16.912	15.172		11.817							
1/24/2007	16:00	16.646	14.413	12.445	15.867	17.768	17.007	16.929	15.189		11.827							
1/24/2007	20:00	16.659	14.422	12.457	15.877	17.788	17.023	16.943	15.213		11.835							
1/25/2007	0:00	16.671	14.428	12.469	15.887	17.8	17.034	16.958	15.221		11.843							
1/25/2007	4:00	16.673	14.438	12.478	15.898	17.807	17.038	16.967	15.23		11.851							
1/25/2007	8:00	16.675	14.447	12.49	15.904	17.814	17.046	16.974	15.234		11.861							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
1/25/2007	12:00	16.712	14.463	12.498	15.92	17.815	17.053	16.984	15.241		11.878							
1/25/2007	16:00	16.708	14.469	12.506	15.924	17.822	17.066	16.986	15.256		11.906							
1/25/2007	20:00	16.716	14.478	12.514	15.931	17.83	17.076	16.993	15.266		11.904							
1/26/2007	0:00	16.722	14.484	12.52	15.935	17.828	17.08	16.993	15.268		11.892							
1/26/2007	4:00	16.718	14.484	12.527	15.933	17.823	17.08	16.991	15.271		11.902							
1/26/2007	8:00	16.716	14.488	12.533	15.935	17.818	17.082	16.989	15.271		11.904							
1/26/2007	12:00	16.714	14.494	12.535	15.939	17.815	17.08	16.984	15.273		11.937							
1/26/2007	16:00	16.712	14.499	12.547	15.947	17.813	17.087	16.982	15.271		12.004							
1/26/2007	20:00	16.724	14.513	12.563	15.955	17.829	17.099	16.996	15.279		11.971							
1/27/2007	0:00	16.731	14.511	12.568	15.959	17.845	17.105	17.005	15.279		11.914							
1/27/2007	4:00	16.733	14.507	12.572	15.957	17.857	17.112	17.015	15.275		11.859							
1/27/2007	8:00	16.733	14.503	12.574	15.957	17.868	17.116	17.025	15.275		11.831							
1/27/2007	12:00	16.743	14.505	12.58	15.965	17.874	17.129	17.037	15.281		11.827							
1/27/2007	16:00	16.739	14.503	12.586	15.963	17.884	17.129	17.044	15.283		11.843							
1/27/2007	20:00	16.747	14.499	12.598	15.963	17.898	17.137	17.058	15.275		11.784							
1/28/2007	0:00	16.733	14.499	12.602	15.968	17.905	17.141	17.068	15.281		11.758							
1/28/2007	4:00	16.718	14.498	12.606	15.965	17.901	17.139	17.07	15.279		11.756							
1/28/2007	8:00	16.708	14.498	12.615	15.959	17.903	17.139	17.075	15.279		11.746							
1/28/2007	12:00	16.771	14.511	12.604	15.961	17.879	17.156	17.065	15.26		11.786							
1/28/2007	16:00	16.737	14.505	12.611	15.947	17.887	17.141	17.068	15.298		11.932							
1/28/2007	20:00	16.737	14.499	12.625	15.941	17.885	17.133	17.072	15.264		11.941							
1/29/2007	0:00	16.706	14.498	12.627	15.937	17.879	17.135	17.065	15.264		11.918							
1/29/2007	4:00	16.692	14.498	12.622	15.928	17.871	17.143	17.061	15.262		11.916							
1/29/2007	8:00	16.688	14.503	12.629	15.928	17.879	17.139	17.07	15.26		11.918							
1/29/2007	12:00	16.724	14.511	12.619	15.926	17.871	17.141	17.058	15.264		11.951							
1/29/2007	16:00	16.712	14.513	12.629	15.922	17.877	17.141	17.07	15.266		11.935							
1/29/2007	20:00	16.72	14.517	12.647	15.931	17.897	17.141	17.087	15.26		11.941							
1/30/2007	0:00	16.712	14.523	12.668	15.937	17.924	17.149	17.111	15.256		11.935							
1/30/2007	4:00	16.692	14.528	12.676	15.943	17.932	17.15	17.123	15.26		11.932							
1/30/2007	8:00	16.69	14.536	12.682	15.949	17.935	17.154	17.132	15.275		11.937							
1/30/2007	12:00	16.778	14.557	12.662	15.953	17.916	17.181	17.123	15.241		11.975							
1/30/2007	16:00	16.751	14.552	12.668	15.949	17.934	17.154	17.128	15.311		11.969							
1/30/2007	20:00	16.747	14.552	12.709	15.945	17.943	17.156	17.154	15.268		11.953							
1/31/2007	0:00	16.706	14.555	12.713	15.953	17.943	17.164	17.151	15.281		11.945							
1/31/2007	4:00	16.7	14.561	12.709	15.955	17.929	17.166	17.142	15.288		11.951							
1/31/2007	8:00	16.712	14.561	12.701	15.949	17.913	17.179	17.132	15.286		11.953							
1/31/2007	12:00	16.761	14.571	12.676	15.941	17.897	17.187	17.108	15.273		11.987							
1/31/2007	16:00	16.751	14.555	12.68	15.928	17.897	17.179	17.106	15.29		11.979							
1/31/2007	20:00	16.749	14.557	12.694	15.928	17.908	17.181	17.111	15.29		11.979							
2/1/2007	0:00	16.724	14.555	12.717	15.935	17.922	17.183	17.13	15.298		11.973							
2/1/2007	4:00	16.718	14.561	12.719	15.941	17.925	17.183	17.125	15.298		11.971							
2/1/2007	8:00	16.706	14.569	12.741	15.951	17.929	17.164	17.135	15.288		11.959							
2/1/2007	12:00	16.745	14.584	12.717	15.961	17.916	17.176	17.123	15.279		11.989							
2/1/2007	16:00	16.763	14.579	12.725	15.963	17.94	17.185	17.12	15.318		11.997							
2/1/2007	20:00	16.753	14.584	12.744	15.961	17.953	17.2	17.137	15.298		11.991							
2/2/2007	0:00	16.759	14.596	12.766	15.976	17.975	17.21	17.159	15.307		11.997							
2/2/2007	4:00	16.743	14.604	12.786	15.994	17.998	17.189	17.185	15.322		12.002							
2/2/2007	8:00	16.745	14.611	12.789	16.007	17.998	17.196	17.19	15.337		12.01							
2/2/2007	12:00	16.823	14.637	12.768	16.025	18.007	17.243	17.178	15.309		12.04							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
2/2/2007	16:00	16.833	14.623	12.766	16.015	18.023	17.237	17.171	15.367		12.05							
2/2/2007	20:00	16.792	14.623	12.811	16.015	18.025	17.241	17.202	15.35		12.028							
2/3/2007	0:00	16.784	14.637	12.819	16.027	18.028	17.252	17.207	15.369		12.024							
2/3/2007	4:00	16.798	14.648	12.825	16.044	18.044	17.258	17.223	15.38		12.044							
2/3/2007	8:00	16.808	14.658	12.832	16.054	18.052	17.262	17.24	15.388		12.054							
2/3/2007	12:00	16.912	14.687	12.807	16.074	18.03	17.306	17.233	15.352		12.103							
2/3/2007	16:00	16.91	14.673	12.821	16.066	18.055	17.279	17.233	15.431		12.113							
2/3/2007	20:00	16.876	14.673	12.868	16.072	18.078	17.279	17.278	15.412		12.101							
2/4/2007	0:00	16.851	14.693	12.887	16.093	18.094	17.292	17.293	15.429		12.079							
2/4/2007	4:00	16.863	14.706	12.887	16.103	18.097	17.306	17.293	15.442		12.099							
2/4/2007	8:00	16.88	14.712	12.889	16.113	18.099	17.319	17.3	15.449		12.109							
2/4/2007	12:00	16.98	14.741	12.864	16.134	18.081	17.369	17.288	15.427		12.166							
2/4/2007	16:00	16.976	14.727	12.887	16.124	18.118	17.357	17.298	15.491		12.182							
2/4/2007	20:00	16.965	14.725	12.926	16.126	18.139	17.359	17.339	15.474		12.178							
2/5/2007	0:00	16.947	14.749	12.946	16.154	18.143	17.351	17.357	15.481		12.164							
2/5/2007	4:00	16.945	14.764	12.952	16.169	18.153	17.368	17.36	15.506		12.166							
2/5/2007	8:00	16.953	14.774	12.956	16.177	18.159	17.376	17.365	15.515		12.18							
2/5/2007	12:00	17.014	14.793	12.929	16.19	18.147	17.42	17.338	15.506		12.223							
2/5/2007	16:00	17.021	14.781	12.95	16.183	18.175	17.422	17.353	15.558		12.241							
2/5/2007	20:00	17.017	14.783	12.981	16.189	18.187	17.424	17.374	15.551		12.235							
2/6/2007	0:00	17.008	14.795	12.995	16.202	18.19	17.422	17.386	15.556		12.233							
2/6/2007	4:00	17.008	14.807	13.001	16.212	18.177	17.424	17.386	15.564		12.233							
2/6/2007	8:00	16.998	14.81	13.003	16.214	18.159	17.418	17.374	15.566		12.229							
2/6/2007	12:00	17.031	14.82	12.981	16.22	18.15	17.434	17.338	15.571		12.255							
2/6/2007	16:00	17.033	14.824	13.001	16.222	18.169	17.432	17.362	15.579		12.278							
2/6/2007	20:00	17.039	14.832	13.026	16.239	18.199	17.439	17.391	15.588		12.284							
2/7/2007	0:00	17.051	14.843	13.042	16.255	18.216	17.449	17.408	15.588		12.296							
2/7/2007	4:00	17.066	14.853	13.067	16.267	18.228	17.456	17.425	15.586		12.306							
2/7/2007	8:00	17.063	14.859	13.077	16.274	18.233	17.458	17.432	15.599		12.302							
2/7/2007	12:00	17.078	14.872	13.061	16.284	18.243	17.481	17.427	15.626		12.302							
2/7/2007	16:00	17.09	14.874	13.069	16.284	18.26	17.515	17.43	15.654		12.324							
2/7/2007	20:00	17.108	14.878	13.114	16.286	18.254	17.512	17.444	15.646		12.345							
2/8/2007	0:00	17.102	14.892	13.112	16.302	18.275	17.512	17.449	15.654		12.333							
2/8/2007	4:00	17.108	14.903	13.118	16.315	18.283	17.518	17.456	15.667		12.335							
2/8/2007	8:00	17.112	14.909	13.12	16.321	18.288	17.523	17.461	15.676		12.341							
2/8/2007	12:00	17.135	14.922	13.108	16.327	18.325	17.56	17.454	15.686		12.355							
2/8/2007	16:00	17.137	14.919	13.12	16.329	18.315	17.565	17.458	15.699		12.373							
2/8/2007	20:00	17.157	14.924	13.151	16.344	18.302	17.563	17.473	15.693		12.389							
2/9/2007	0:00	17.155	14.937	13.165	16.352	18.3	17.558	17.48	15.699		12.389							
2/9/2007	4:00	17.155	14.948	13.171	16.364	18.308	17.563	17.487	15.706		12.389							
2/9/2007	8:00	17.159	14.957	13.179	16.366	18.313	17.565	17.49	15.712		12.396							
2/9/2007	12:00	17.178	14.967	13.179	16.391	18.339	17.588	17.497	15.721		12.406							
2/9/2007	16:00	17.202	14.971	13.186	16.399	18.345	17.597	17.499	15.736		12.424							
2/9/2007	20:00	17.196	14.977	13.208	16.401	18.361	17.6	17.523	15.749		12.434							
2/10/2007	0:00	17.19	14.988	13.229	16.41	18.355	17.596	17.533	15.751		12.436							
2/10/2007	4:00	17.204	15.002	13.241	16.42	18.357	17.598	17.535	15.761		12.446							
2/10/2007	8:00	17.206	15.013	13.249	16.428	18.365	17.607	17.537	15.772		12.457							
2/10/2007	12:00	17.26	15.025	13.235	16.438	18.37	17.632	17.535	15.774		12.465							
2/10/2007	16:00	17.26	15.019	13.245	16.424	18.368	17.634	17.535	15.796		12.485							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
2/10/2007	20:00	17.257	15.027	13.267	16.43	18.368	17.632	17.551	15.785		12.497							
2/11/2007	0:00	17.243	15.034	13.281	16.44	18.373	17.63	17.557	15.787		12.493							
2/11/2007	4:00	17.233	15.046	13.292	16.452	18.376	17.628	17.557	15.796		12.491							
2/11/2007	8:00	17.231	15.056	13.298	16.461	18.377	17.632	17.557	15.804		12.493							
2/11/2007	12:00	17.276	15.058	13.286	16.461	18.373	17.653	17.542	15.811		12.503							
2/11/2007	16:00	17.278	15.058	13.3	16.459	18.379	17.655	17.552	15.824		12.521							
2/11/2007	20:00	17.282	15.067	13.314	16.471	18.384	17.663	17.564	15.826		12.532							
2/12/2007	0:00	17.286	15.077	13.325	16.479	18.394	17.67	17.573	15.83		12.54							
2/12/2007	4:00	17.288	15.083	13.335	16.484	18.397	17.672	17.576	15.832		12.544							
2/12/2007	8:00	17.292	15.091	13.345	16.492	18.405	17.678	17.583	15.837		12.55							
2/12/2007	12:00	17.298	15.1	13.357	16.504	18.437	17.695	17.59	15.839		12.558							
2/12/2007	16:00	17.292	15.1	13.357	16.504	18.427	17.693	17.585	15.843		12.558							
2/12/2007	20:00	17.288	15.089	13.349	16.492	18.413	17.667	17.576	15.832		12.538							
2/13/2007	0:00	17.27	15.065	13.329	16.467	18.4	17.657	17.561	15.815		12.524							
2/13/2007	4:00	17.28	15.073	13.337	16.486	18.413	17.661	17.569	15.817		12.532							
2/13/2007	8:00	17.29	15.081	13.349	16.498	18.427	17.667	17.583	15.828		12.54							
2/13/2007	12:00	17.309	15.096	13.364	16.51	18.446	17.682	17.602	15.834		12.536							
2/13/2007	16:00	17.321	15.118	13.376	16.516	18.457	17.693	17.616	15.849		12.558							
2/13/2007	20:00	17.331	15.131	13.396	16.527	18.474	17.701	17.636	15.864		12.572							
2/14/2007	0:00	17.331	15.141	13.415	16.537	18.488	17.718	17.652	15.879		12.584							
2/14/2007	4:00	17.327	15.15	13.431	16.545	18.496	17.722	17.662	15.888		12.593							
2/14/2007	8:00	17.325	15.16	13.443	16.551	18.504	17.728	17.669	15.899		12.599							
2/14/2007	12:00	17.378	15.17	13.454	16.57	18.512	17.743	17.679	15.884		12.621							
2/14/2007	16:00	17.405	15.181	13.456	16.582	18.536	17.775	17.679	15.922		12.635							
2/14/2007	20:00	17.362	15.191	13.482	16.574	18.554	17.798	17.705	15.965		12.619							
2/15/2007	0:00	17.372	15.204	13.495	16.59	18.563	17.798	17.715	15.969		12.641							
2/15/2007	4:00	17.384	15.212	13.499	16.597	18.563	17.798	17.719	15.969		12.656							
2/15/2007	8:00	17.396	15.217	13.507	16.605	18.565	17.8	17.719	15.972		12.662							
2/15/2007	12:00	17.449	15.235	13.509	16.627	18.59	17.834	17.729	15.965		12.684							
2/15/2007	16:00	17.484	15.247	13.507	16.632	18.639	17.833	17.731	15.984		12.706							
2/15/2007	20:00	17.411	15.243	13.544	16.625	18.64	17.867	17.758	16.034		12.684							
2/16/2007	0:00	17.4	15.253	13.556	16.634	18.627	17.871	17.76	16.038		12.698							
2/16/2007	4:00	17.415	15.259	13.558	16.641	18.611	17.867	17.755	16.029		12.71							
2/16/2007	8:00	17.423	15.26	13.558	16.644	18.582	17.855	17.739	16.021		12.716							
2/16/2007	12:00	17.519	15.276	13.542	16.66	18.573	17.896	17.715	15.999		12.729							
2/16/2007	16:00	17.53	15.27	13.54	16.646	18.579	17.898	17.703	16.021		12.743							
2/16/2007	20:00	17.519	15.266	13.548	16.64	18.579	17.888	17.703	16.029		12.747							
2/17/2007	0:00	17.505	15.278	13.566	16.648	18.602	17.892	17.722	16.044		12.743							
2/17/2007	4:00	17.503	15.284	13.587	16.66	18.624	17.896	17.743	16.049		12.745							
2/17/2007	8:00	17.515	15.295	13.603	16.675	18.64	17.898	17.765	16.049		12.751							
2/17/2007	12:00	17.527	15.316	13.607	16.703	18.659	17.909	17.782	16.055		12.775							
2/17/2007	16:00	17.535	15.324	13.623	16.712	18.675	17.916	17.806	16.096		12.798							
2/17/2007	20:00	17.532	15.326	13.646	16.714	18.688	17.924	17.818	16.1		12.8							
2/18/2007	0:00	17.552	15.342	13.662	16.734	18.696	17.94	17.827	16.098		12.816							
2/18/2007	4:00	17.55	15.345	13.679	16.74	18.701	17.947	17.837	16.107		12.816							
2/18/2007	8:00	17.552	15.353	13.687	16.747	18.698	17.951	17.839	16.111		12.82							
2/18/2007	12:00	17.587	15.378	13.677	16.767	18.693	17.955	17.834	16.115		12.84							
2/18/2007	16:00	17.583	15.378	13.675	16.771	18.69	17.955	17.834	16.141		12.856							
2/18/2007	20:00	17.581	15.382	13.689	16.775	18.688	17.955	17.839	16.147		12.858							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
2/19/2007	0:00	17.581	15.386	13.699	16.777	18.685	17.961	17.839	16.147		12.879							
2/19/2007	4:00	17.576	15.386	13.703	16.777	18.675	17.963	17.83	16.137		12.887							
2/19/2007	8:00	17.574	15.388	13.705	16.771	18.675	17.964	17.825	16.13		12.871							
2/19/2007	12:00	17.574	15.394	13.713	16.779	18.685	17.968	17.83	16.126		12.897							
2/19/2007	16:00	17.585	15.409	13.724	16.792	18.708	17.982	17.841	16.119		12.897							
2/19/2007	20:00	17.59	15.398	13.734	16.804	18.714	17.991	17.839	16.111		12.844							
2/20/2007	0:00	17.593	15.386	13.72	16.806	18.717	17.993	17.832	16.1		12.899							
2/20/2007	4:00	17.599	15.372	13.695	16.794	18.715	17.993	17.818	16.096		12.899							
2/20/2007	8:00	17.593	15.353	13.666	16.779	18.708	17.982	17.798	16.089		12.899							
2/20/2007	12:00	17.583	15.345	13.642	16.781	18.714	17.974	17.784	16.079		12.873							
2/20/2007	16:00	17.597	15.334	13.623	16.775	18.701	17.949	17.777	16.077		12.854							
2/20/2007	20:00	17.601	15.311	13.609	16.777	18.691	17.957	17.751	16.064		12.767							
2/21/2007	0:00	17.593	15.288	13.576	16.759	18.683	17.945	17.734	16.051		12.74							
2/21/2007	4:00	17.583	15.262	13.54	16.726	18.671	17.928	17.71	16.038		12.726							
2/21/2007	8:00	17.568	15.237	13.503	16.697	18.652	17.909	17.686	16.021		12.761							
2/21/2007	12:00	17.538	15.216	13.472	16.681	18.658	17.896	17.669	15.997		12.751							
2/21/2007	16:00	17.54	15.201	13.454	16.66	18.631	17.884	17.65	15.987		12.771							
2/21/2007	20:00	17.54	15.177	13.437	16.64	18.62	17.865	17.638	15.965		12.683							
2/22/2007	0:00	17.519	15.152	13.405	16.613	18.615	17.844	17.628	15.944		12.623							
2/22/2007	4:00	17.501	15.129	13.366	16.578	18.602	17.825	17.619	15.924		12.588							
2/22/2007	8:00	17.483	15.104	13.327	16.543	18.578	17.802	17.597	15.907		12.541							
2/22/2007	12:00	17.46	15.081	13.294	16.51	18.56	17.781	17.583	15.886		12.547							
2/22/2007	16:00	17.434	15.056	13.267	16.479	18.525	17.751	17.559	15.871		12.635							
2/22/2007	20:00	17.407	15.031	13.239	16.449	18.49	17.72	17.528	15.841		12.592							
2/23/2007	0:00	17.37	15	13.206	16.412	18.451	17.686	17.494	15.809		12.574							
2/23/2007	4:00	17.333	14.97	13.175	16.371	18.413	17.655	17.461	15.779		12.562							
2/23/2007	8:00	17.297	14.942	13.143	16.332	18.369	17.619	17.425	15.746		12.55							
2/23/2007	12:00	17.258	14.915	13.116	16.295	18.324	17.586	17.389	15.71		12.352							
2/23/2007	16:00	17.217	14.888	13.091	16.264	18.283	17.552	17.351	15.686		12.314							
2/23/2007	20:00	17.191	14.863	13.065	16.231	18.244	17.516	17.315	15.65		12.287							
2/24/2007	0:00	17.15	14.836	13.038	16.194	18.211	17.479	17.281	15.611		12.255							
2/24/2007	4:00	17.107	14.806	13.005	16.153	18.163	17.433	17.243	15.571		12.22							
2/24/2007	8:00	17.066	14.776	12.973	16.11	18.118	17.395	17.2	15.53		12.22							
2/24/2007	12:00	17.009	14.735	12.934	16.073	18.058	17.426	17.147	15.472		12.243							
2/24/2007	16:00	16.964	14.704	12.907	16.03	18.01	17.466	17.104	15.429		12.279							
2/24/2007	20:00	16.937	14.654	12.819	15.974	17.948	17.392	17.039	15.367		12.253							
2/25/2007	0:00	16.856	14.604	12.756	15.921	17.906	17.147	16.989	15.305		12.19							
2/25/2007	4:00	16.812	14.563	12.756	15.875	17.873	17.061	16.951	15.258		12.139							
2/25/2007	8:00	16.77	14.521	12.717	15.834	17.841	17	16.917	15.217		12.076							
2/25/2007	12:00	16.733	14.474	12.67	15.793	17.809	17.061	16.884	15.178		12.021							
2/25/2007	16:00	16.69	14.428	12.625	15.752	17.767	17.023	16.845	15.14		12.009							
2/25/2007	20:00	16.647	14.381	12.58	15.709	17.725	16.969	16.812	15.101		11.965							
2/26/2007	0:00	16.602	14.329	12.533	15.664	17.682	16.927	16.771	15.06		11.928							
2/26/2007	4:00	16.553	14.277	12.484	15.617	17.629	16.901	16.726	15.015		11.906							
2/26/2007	8:00	16.508	14.231	12.441	15.573	17.586	16.845	16.69	14.973		11.684							
2/26/2007	12:00	16.462	14.188	12.4	15.53	17.546	16.828	16.657	14.932		11.633							
2/26/2007	16:00	16.419	14.149	12.369	15.493	17.506	16.813	16.623	14.878		11.624							
2/26/2007	20:00	16.386	14.115	12.336	15.458	17.486	16.717	16.594	14.85		11.536							
2/27/2007	0:00	16.345	14.076	12.302	15.426	17.443	16.687	16.565	14.812		11.451							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
2/27/2007	4:00	16.302	14.037	12.263	15.384	17.398	16.647	16.53	14.769		11.41							
2/27/2007	8:00	16.265	14.003	12.23	15.35	17.361	16.607	16.499	14.73		11.365							
2/27/2007	12:00	16.227	13.972	12.201	15.317	17.344	16.582	16.472	14.692		11.358							
2/27/2007	16:00	16.186	13.939	12.171	15.28	17.29	16.536	16.441	14.655		11.298							
2/27/2007	20:00	16.151	13.908	12.14	15.243	17.241	16.5	16.402	14.623		11.258							
2/28/2007	0:00	16.114	13.875	12.111	15.21	17.201	16.463	16.369	14.591		11.225							
2/28/2007	4:00	16.067	13.84	12.072	15.171	17.147	16.416	16.321	14.55		11.187							
2/28/2007	8:00	16.027	13.804	12.04	15.136	17.095	16.372	16.278	14.507		11.148							
2/28/2007	12:00	15.982	13.775	12.009	15.095	17.052	16.335	16.24	14.469		11.111							
2/28/2007	16:00	15.939	13.742	11.976	15.06	17.01	16.293	16.194	14.432		11.075							
2/28/2007	20:00	15.916	13.713	11.948	15.027	16.977	16.263	16.161	14.4		11.046							
3/1/2007	0:00	15.88	13.68	11.919	14.998	16.938	16.225	16.125	14.368		11.016							
3/1/2007	4:00	15.837	13.648	11.884	14.959	16.892	16.198	16.082	14.323		10.998							
3/1/2007	8:00	15.788	13.605	11.841	14.914	16.845	16.16	16.034	14.274		10.973							
3/1/2007	12:00	15.741	13.568	11.796	14.875	16.817	16.079	15.995	14.218		10.914							
3/1/2007	16:00	15.724	13.549	11.784	14.854	16.793	16.055	15.979	14.197		10.884							
3/1/2007	20:00	15.702	13.535	11.769	14.838	16.772	16.028	15.965	14.175		10.849							
3/2/2007	0:00	15.677	13.512	11.749	14.811	16.749	16.003	15.943	14.147		10.825							
3/2/2007	4:00	15.645	13.482	11.727	14.776	16.714	15.967	15.917	14.113		10.792							
3/2/2007	8:00	15.614	13.456	11.704	14.748	16.685	15.938	15.891	14.081		10.762							
3/2/2007	12:00	15.592	13.437	11.684	14.733	16.663	15.906	15.869	14.053		10.74							
3/2/2007	16:00	15.565	13.419	11.667	14.706	16.639	15.879	15.85	14.027		10.752							
3/2/2007	20:00	15.547	13.402	11.653	14.686	16.615	15.862	15.833	14.008		10.699							
3/3/2007	0:00	15.52	13.377	11.632	14.661	16.591	15.835	15.811	13.984		10.671							
3/3/2007	4:00	15.496	13.357	11.614	14.637	16.575	15.814	15.795	13.959		10.642							
3/3/2007	8:00	15.475	13.338	11.6	14.614	16.559	15.791	15.783	13.933		10.618							
3/3/2007	12:00	15.463	13.33	11.591	14.602	16.547	15.77	15.778	13.92		10.604							
3/3/2007	16:00	15.44	13.315	11.581	14.585	16.533	15.753	15.771	13.899		10.593							
3/3/2007	20:00	15.422	13.303	11.569	14.573	16.517	15.736	15.756	13.884		10.579							
3/4/2007	0:00	15.408	13.292	11.561	14.556	16.501	15.722	15.747	13.864		10.565							
3/4/2007	4:00	15.383	13.279	11.548	14.54	16.482	15.699	15.73	13.847		10.547							
3/4/2007	8:00	15.363	13.263	11.534	14.522	16.456	15.676	15.711	13.828		10.529							
3/4/2007	12:00	15.351	13.254	11.52	14.507	16.429	15.659	15.694	13.815		10.518							
3/4/2007	16:00	15.328	13.242	11.516	14.489	16.413	15.646	15.677	13.791		10.496							
3/4/2007	20:00	15.316	13.23	11.503	14.476	16.395	15.625	15.663	13.776		10.486							
3/5/2007	0:00	15.297	13.216	11.493	14.462	16.378	15.608	15.646	13.763		10.474							
3/5/2007	4:00	15.277	13.199	11.479	14.417	16.352	15.587	15.622	13.744		10.457							
3/5/2007	8:00	15.259	13.184	11.463	14.396	16.328	15.571	15.598	13.725		10.441							
3/5/2007	12:00	15.238	13.176	11.454	14.386	16.328	15.558	15.584	13.708		10.431							
3/5/2007	16:00	15.22	13.165	11.448	14.372	16.304	15.539	15.57	13.699		10.419							
3/5/2007	20:00	15.216	13.151	11.436	14.359	16.281	15.52	15.548	13.68		10.411							
3/6/2007	0:00	15.197	13.142	11.426	14.345	16.267	15.508	15.536	13.667		10.4							
3/6/2007	4:00	15.181	13.128	11.413	14.326	16.246	15.489	15.515	13.652		10.388							
3/6/2007	8:00	15.157	13.113	11.397	14.31	16.214	15.468	15.483	13.633		10.37							
3/6/2007	12:00	15.138	13.101	11.381	14.291	16.188	15.447	15.457	13.611		10.356							
3/6/2007	16:00	15.112	13.085	11.364	14.271	16.15	15.424	15.424	13.596		10.34							
3/6/2007	20:00	15.097	13.066	11.344	14.25	16.121	15.401	15.395	13.577		10.326							
3/7/2007	0:00	15.079	13.055	11.329	14.238	16.107	15.382	15.373	13.56		10.313							
3/7/2007	4:00	15.061	13.043	11.315	14.222	16.089	15.363	15.352	13.545		10.301							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
3/7/2007	8:00	15.048	13.031	11.303	14.209	16.076	15.348	15.335	13.528		10.289							
3/7/2007	12:00	15.038	13.028	11.297	14.201	16.072	15.333	15.33	13.515		10.279							
3/7/2007	16:00	15.024	13.017	11.287	14.189	16.054	15.319	15.316	13.502		10.268							
3/7/2007	20:00	15.007	13.006	11.272	14.174	16.033	15.298	15.292	13.491		10.256							
3/8/2007	0:00	14.993	12.996	11.26	14.164	16.016	15.281	15.275	13.48		10.246							
3/8/2007	4:00	14.979	12.989	11.248	14.15	15.995	15.264	15.254	13.463		10.234							
3/8/2007	8:00	14.961	12.977	11.233	14.133	15.972	15.247	15.23	13.45		10.222							
3/8/2007	12:00	14.944	12.968	11.219	14.123	15.955	15.235	15.213	13.431		10.212							
3/8/2007	16:00	14.924	12.958	11.207	14.106	15.924	15.214	15.187	13.425		10.197							
3/8/2007	20:00	14.911	12.94	11.192	14.092	15.887	15.18	15.16	13.405		10.189							
3/9/2007	0:00	14.891	12.929	11.176	14.078	15.871	15.161	15.136	13.386		10.179							
3/9/2007	4:00	14.873	12.915	11.162	14.065	15.85	15.144	15.112	13.365		10.167							
3/9/2007	8:00	14.862	12.89	11.129	14.033	15.818	15.132	15.079	13.335		10.14							
3/9/2007	12:00	14.824	12.88	11.119	14.024	15.815	15.149	15.067	13.326		10.165							
3/9/2007	16:00	14.822	12.871	11.115	14.014	15.805	15.094	15.057	13.32		10.12							
3/9/2007	20:00	14.822	12.863	11.104	14.004	15.797	15.079	15.048	13.311		10.116							
3/10/2007	0:00	14.807	12.853	11.094	13.991	15.791	15.063	15.038	13.3		10.108							
3/10/2007	4:00	14.791	12.844	11.084	13.975	15.777	15.046	15.024	13.287		10.096							
3/10/2007	8:00	14.779	12.836	11.074	13.961	15.765	15.035	15.014	13.275		10.084							
3/10/2007	12:00	14.764	12.834	11.063	13.95	15.754	15.023	15.007	13.264		10.075							
3/10/2007	16:00	14.752	12.826	11.057	13.94	15.74	15.01	14.997	13.255		10.065							
3/10/2007	20:00	14.746	12.818	11.047	13.928	15.729	15	14.985	13.247		10.059							
3/11/2007	0:00	14.732	12.811	11.037	13.92	15.717	14.985	14.973	13.236		10.049							
3/11/2007	4:00	14.72	12.805	11.031	13.909	15.708	14.974	14.964	13.225		10.043							
3/11/2007	8:00	14.707	12.799	11.023	13.899	15.696	14.962	14.954	13.217		10.033							
3/11/2007	12:00	14.693	12.793	11.016	13.889	15.682	14.949	14.945	13.206		10.025							
3/11/2007	16:00	14.685	12.788	11.008	13.883	15.671	14.943	14.936	13.2		10.017							
3/11/2007	20:00	14.668	12.778	10.998	13.866	15.65	14.925	14.916	13.187		10.01							
3/12/2007	0:00	14.658	12.768	10.988	13.856	15.639	14.914	14.902	13.176		9.999							
3/12/2007	4:00	14.642	12.759	10.977	13.843	15.621	14.899	14.885	13.165		9.988							
3/12/2007	8:00	14.628	12.751	10.969	13.829	15.605	14.887	14.871	13.155		9.98							
3/12/2007	12:00	14.607	12.747	10.959	13.823	15.587	14.874	14.856	13.14		9.97							
3/12/2007	16:00	14.593	12.737	10.951	13.809	15.568	14.861	14.839	13.133		9.962							
3/12/2007	20:00	14.595	12.728	10.945	13.798	15.557	14.849	14.825	13.125		9.958							
3/13/2007	0:00	14.579	12.718	10.935	13.79	15.547	14.836	14.813	13.114		9.95							
3/13/2007	4:00	14.562	12.708	10.926	13.778	15.533	14.823	14.796	13.105		9.939							
3/13/2007	8:00	14.548	12.701	10.916	13.767	15.519	14.809	14.784	13.09		9.932							
3/13/2007	12:00	14.53	12.695	10.908	13.757	15.515	14.809	14.77	13.088		9.922							
3/13/2007	16:00	14.522	12.685	10.902	13.749	15.499	14.798	14.753	13.08		9.911							
3/13/2007	20:00	14.526	12.677	10.894	13.737	15.493	14.798	14.746	13.082		9.913							
3/14/2007	0:00	14.515	12.67	10.889	13.73	15.485	14.786	14.736	13.075		9.907							
3/14/2007	4:00	14.497	12.662	10.879	13.718	15.469	14.771	14.722	13.058		9.897							
3/14/2007	8:00	14.485	12.656	10.875	13.71	15.459	14.756	14.715	13.05		9.891							
3/14/2007	12:00	14.473	12.654	10.871	13.708	15.459	14.762	14.71	13.052		9.885							
3/14/2007	16:00	14.475	12.648	10.869	13.704	15.447	14.758	14.706	13.047		9.88							
3/14/2007	20:00	14.491	12.656	10.869	13.708	15.464	14.762	14.712	13.05		9.891							
3/15/2007	0:00	14.481	12.654	10.873	13.7	15.469	14.754	14.715	13.05		9.891							
3/15/2007	4:00	14.477	12.65	10.875	13.698	15.466	14.75	14.715	13.045		9.887							
3/15/2007	8:00	14.474	12.656	10.879	13.7	15.469	14.752	14.72	13.043		9.885							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
3/15/2007	12:00	14.477	12.662	10.883	13.702	15.478	14.758	14.732	13.034		9.889							
3/15/2007	16:00	14.477	12.664	10.887	13.7	15.475	14.758	14.737	13.045		9.887							
3/15/2007	20:00	14.487	12.672	10.896	13.706	15.486	14.762	14.744	13.054		9.895							
3/16/2007	0:00	14.493	12.679	10.906	13.712	15.499	14.767	14.754	13.06		9.903							
3/16/2007	4:00	14.491	12.681	10.908	13.712	15.499	14.767	14.758	13.062		9.903							
3/16/2007	8:00	14.493	12.687	10.914	13.714	15.501	14.771	14.761	13.058		9.907							
3/16/2007	12:00	14.503	12.695	10.922	13.72	15.511	14.788	14.77	13.071		9.915							
3/16/2007	16:00	14.483	12.695	10.924	13.719	15.499	14.781	14.766	13.069		9.915							
3/16/2007	20:00	14.501	12.697	10.926	13.718	15.494	14.781	14.761	13.077		9.921							
3/17/2007	0:00	14.499	12.699	10.928	13.721	15.491	14.781	14.756	13.082		9.929							
3/17/2007	4:00	14.489	12.693	10.926	13.71	15.477	14.773	14.744	13.077		9.927							
3/17/2007	8:00	14.483	12.693	10.926	13.708	15.471	14.773	14.734	13.075		9.929							
3/17/2007	12:00	14.481	12.697	10.926	13.714	15.467	14.779	14.739	13.077		9.935							
3/17/2007	16:00	14.481	12.695	10.924	13.706	15.466	14.777	14.737	13.08		9.936							
3/17/2007	20:00	14.487	12.697	10.93	13.706	15.474	14.779	14.739	13.082		9.939							
3/18/2007	0:00	14.491	12.701	10.937	13.716	15.478	14.781	14.742	13.088		9.945							
3/18/2007	4:00	14.489	12.699	10.937	13.714	15.474	14.779	14.739	13.088		9.947							
3/18/2007	8:00	14.487	12.699	10.939	13.712	15.472	14.777	14.734	13.086		9.946							
3/18/2007	12:00	14.485	12.699	10.943	13.712	15.464	14.781	14.734	13.086		9.945							
3/18/2007	16:00	14.473	12.695	10.939	13.704	15.445	14.775	14.717	13.084		9.944							
3/18/2007	20:00	14.475	12.691	10.93	13.698	15.44	14.771	14.706	13.082		9.943							
3/19/2007	0:00	14.475	12.689	10.932	13.7	15.443	14.769	14.703	13.082		9.947							
3/19/2007	4:00	14.469	12.687	10.928	13.698	15.443	14.771	14.701	13.082		9.95							
3/19/2007	8:00	14.469	12.689	10.932	13.698	15.45	14.775	14.708	13.08		9.95							
3/19/2007	12:00	14.483	12.701	10.943	13.712	15.469	14.779	14.73	13.082		9.956							
3/19/2007	16:00	14.483	12.706	10.953	13.718	15.474	14.783	14.744	13.088		9.964							
3/19/2007	20:00	14.499	12.712	10.961	13.723	15.49	14.786	14.754	13.097		9.976							
3/20/2007	0:00	14.508	12.722	10.973	13.733	15.506	14.798	14.77	13.107		9.985							
3/20/2007	4:00	14.512	12.728	10.98	13.735	15.512	14.804	14.775	13.114		9.989							
3/20/2007	8:00	14.512	12.732	10.988	13.741	15.514	14.811	14.778	13.12		9.99							
3/20/2007	12:00	14.512	12.726	10.986	13.728	15.506	14.825	14.773	13.12		9.992							
3/20/2007	16:00	14.503	12.73	10.99	13.733	15.498	14.857	14.768	13.12		9.992							
3/20/2007	20:00	14.506	12.728	10.988	13.729	15.491	14.863	14.758	13.12		9.993							
3/21/2007	0:00	14.508	12.73	10.988	13.728	15.49	14.811	14.758	13.122		9.998							
3/21/2007	4:00	14.506	12.726	10.988	13.726	15.485	14.811	14.751	13.125		10.002							
3/21/2007	8:00	14.495	12.724	10.986	13.722	15.478	14.798	14.744	13.122		10							
3/21/2007	12:00	14.499	12.726	10.99	13.728	15.482	14.815	14.746	13.125		10							
3/21/2007	16:00	14.501	12.726	10.99	13.724	15.477	14.813	14.746	13.127		10.002							
3/21/2007	20:00	14.506	12.724	10.988	13.726	15.478	14.813	14.742	13.127		10.004							
3/22/2007	0:00	14.508	12.728	10.992	13.728	15.491	14.823	14.751	13.131		10.008							
3/22/2007	4:00	14.518	12.735	11.002	13.739	15.514	14.83	14.768	13.137		10.017							
3/22/2007	8:00	14.52	12.741	11.01	13.741	15.525	14.836	14.778	13.146		10.023							
3/22/2007	12:00	14.522	12.749	11.018	13.754	15.531	14.849	14.79	13.15		10.025							
3/22/2007	16:00	14.53	12.755	11.027	13.754	15.53	14.853	14.79	13.159		10.037							
3/22/2007	20:00	14.536	12.757	11.027	13.754	15.528	14.857	14.79	13.165		10.039							
3/23/2007	0:00	14.536	12.757	11.029	13.754	15.527	14.859	14.785	13.167		10.041							
3/23/2007	4:00	14.555	12.753	11.027	13.749	15.523	14.855	14.782	13.165		10.043							
3/23/2007	8:00	14.536	12.755	11.025	13.747	15.522	14.857	14.78	13.161		10.033							
3/23/2007	12:00	14.53	12.761	11.031	13.751	15.535	14.87	14.79	13.165		10.057							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
3/23/2007	16:00	14.54	12.762	11.039	13.761	15.539	14.878	14.794	13.176		10.051							
3/23/2007	20:00	14.559	12.764	11.043	13.763	15.546	14.882	14.797	13.189		10.061							
3/24/2007	0:00	14.559	12.766	11.047	13.765	15.552	14.882	14.801	13.193		10.063							
3/24/2007	4:00	14.553	12.762	11.045	13.758	15.544	14.884	14.799	13.187		10.071							
3/24/2007	8:00	14.557	12.768	11.051	13.762	15.555	14.891	14.809	13.191		10.033							
3/24/2007	12:00	14.553	12.77	11.057	13.768	15.559	14.895	14.816	13.193		10.067							
3/24/2007	16:00	14.557	12.776	11.065	13.767	15.557	14.895	14.816	13.2		10.073							
3/24/2007	20:00	14.571	12.78	11.072	13.772	15.565	14.901	14.825	13.208		10.084							
3/25/2007	0:00	14.569	12.782	11.076	13.774	15.568	14.903	14.828	13.21		10.086							
3/25/2007	4:00	14.567	12.782	11.08	13.77	15.567	14.905	14.828	13.21		10.088							
3/25/2007	8:00	14.567	12.784	11.082	13.77	15.568	14.907	14.828	13.21		10.09							
3/25/2007	12:00	14.553	12.788	11.084	13.774	15.562	14.907	14.833	13.208		10.088							
3/25/2007	16:00	14.553	12.791	11.088	13.784	15.567	14.914	14.835	13.221		10.094							
3/25/2007	20:00	14.571	12.795	11.094	13.782	15.568	14.924	14.84	13.223		10.106							
3/26/2007	0:00	14.573	12.797	11.098	13.782	15.578	14.926	14.845	13.225		10.108							
3/26/2007	4:00	14.571	12.799	11.1	13.78	15.58	14.928	14.847	13.225		10.108							
3/26/2007	8:00	14.569	12.801	11.106	13.782	15.584	14.924	14.849	13.227		10.11							
3/26/2007	12:00	14.569	12.807	11.111	13.788	15.594	14.945	14.857	13.232		10.112							
3/26/2007	16:00	14.571	12.813	11.115	13.793	15.603	14.953	14.864	13.234		10.118							
3/26/2007	20:00	14.61	12.805	11.111	13.784	15.599	14.951	14.859	13.24		10.112							
3/27/2007	0:00	14.583	12.809	11.111	13.786	15.599	14.956	14.861	13.238		10.104							
3/27/2007	4:00	14.581	12.809	11.115	13.784	15.595	14.953	14.861	13.238		10.114							
3/27/2007	8:00	14.577	12.807	11.117	13.784	15.594	14.951	14.861	13.236		10.112							
3/27/2007	12:00	14.567	12.805	11.119	13.78	15.597	14.96	14.864	13.236		10.145							
3/27/2007	16:00	14.577	12.801	11.121	13.778	15.6	14.968	14.861	13.247		10.118							
3/27/2007	20:00	14.587	12.801	11.121	13.776	15.602	14.972	14.859	13.251		10.104							
3/28/2007	0:00	14.583	12.797	11.121	13.776	15.6	14.97	14.861	13.251		10.124							
3/28/2007	4:00	14.579	12.793	11.123	13.772	15.597	14.964	14.861	13.249		10.122							
3/28/2007	8:00	14.571	12.793	11.125	13.77	15.603	14.968	14.866	13.242		10.122							
3/28/2007	12:00	14.571	12.795	11.127	13.774	15.621	14.983	14.876	13.245		10.124							
3/28/2007	16:00	14.577	12.797	11.123	13.776	15.624	14.991	14.878	13.249		10.124							
3/28/2007	20:00	14.599	12.803	11.129	13.782	15.626	14.995	14.888	13.257		10.134							
3/29/2007	0:00	14.597	12.805	11.135	13.784	15.631	14.993	14.892	13.262		10.138							
3/29/2007	4:00	14.593	12.807	11.139	13.782	15.629	14.993	14.897	13.262		10.136							
3/29/2007	8:00	14.581	12.809	11.141	13.782	15.641	15	14.902	13.26		10.138							
3/29/2007	12:00	14.593	12.813	11.147	13.793	15.66	15.019	14.909	13.266		10.142							
3/29/2007	16:00	14.55	12.817	11.151	13.797	15.663	15.025	14.909	13.268		10.145							
3/29/2007	20:00	14.602	12.824	11.158	13.803	15.674	15.037	14.924	13.279		10.155							
3/30/2007	0:00	14.595	12.817	11.147	13.79	15.656	15.025	14.914	13.27		10.157							
3/30/2007	4:00	14.602	12.813	11.145	13.784	15.648	15.019	14.914	13.268		10.153							
3/30/2007	8:00	14.585	12.809	11.147	13.778	15.653	15.014	14.912	13.262		10.153							
3/30/2007	12:00	14.585	12.803	11.149	13.782	15.65	15.023	14.909	13.262		10.169							
3/30/2007	16:00	14.587	12.793	11.145	13.774	15.631	15.012	14.905	13.262		10.14							
3/30/2007	20:00	14.593	12.784	11.141	13.764	15.613	15.002	14.892	13.257		10.136							
3/31/2007	0:00	14.604	12.73	11.149	13.727	15.552	14.956	14.845	13.21		10.122							
3/31/2007	4:00	14.532	12.668	10.995	13.671	15.491	14.914	14.758	13.116		10.124							
3/31/2007	8:00	14.459	12.608	10.902	13.622	15.438	14.895	14.689	13.086		10.094							
3/31/2007	12:00	14.422	12.525	10.788	13.577	15.379	14.846	14.612	13.05		10							
3/31/2007	16:00	14.391	12.442	10.685	13.53	15.344	14.788	14.534	13.039		9.919							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
3/31/2007	20:00	14.352	12.357	10.597	13.48	15.293	14.72	14.464	13.011		9.854							
4/1/2007	0:00	14.312	12.276	10.524	13.429	15.241	14.693	14.392	12.979		9.791							
4/1/2007	4:00	14.265	12.196	10.448	13.371	15.187	14.641	14.323	12.942		9.724							
4/1/2007	8:00	14.213	12.123	10.388	13.324	15.139	14.588	14.26	12.893		9.665							
4/1/2007	12:00	14.181	12.063	10.331	13.293	15.099	14.567	14.21	12.859		9.61							
4/1/2007	16:00	14.138	12.005	10.276	13.246	15.054	14.506	14.157	12.829		9.557							
4/1/2007	20:00	14.113	11.947	10.219	13.203	15.01	14.46	14.11	12.79		9.511							
4/2/2007	0:00	14.077	11.897	10.165	13.162	14.974	14.414	14.064	12.751		9.464							
4/2/2007	4:00	14.034	11.847	10.114	13.117	14.929	14.366	14.019	12.713		9.411							
4/2/2007	8:00	13.989	11.8	10.065	13.075	14.887	14.322	13.976	12.668		9.364							
4/2/2007	12:00	13.946	11.76	10.022	13.034	14.858	14.292	13.937	12.627		9.318							
4/2/2007	16:00	13.897	11.717	9.973	12.993	14.812	14.246	13.887	12.597		9.271							
4/2/2007	20:00	13.883	11.673	9.926	12.952	14.764	14.21	13.842	12.565		9.23							
4/3/2007	0:00	13.846	11.636	9.881	12.917	14.724	14.166	13.803	12.533		9.194							
4/3/2007	4:00	13.81	11.601	9.84	12.882	14.687	14.126	13.77	12.496		9.157							
4/3/2007	8:00	13.772	11.57	9.801	12.849	14.659	14.089	13.741	12.46		9.117							
4/3/2007	12:00	13.754	11.553	9.776	12.831	14.658	14.074	13.732	12.436		9.092							
4/3/2007	16:00	13.727	11.536	9.756	12.81	14.64	14.047	13.72	12.411		9.062							
4/3/2007	20:00	13.716	11.52	9.733	12.79	14.619	14.017	13.707	12.396		9.039							
4/4/2007	0:00	13.695	11.509	9.721	12.771	14.607	13.996	13.698	12.378		9.015							
4/4/2007	4:00	13.673	11.497	9.702	12.747	14.584	13.973	13.686	12.357		8.993							
4/4/2007	8:00	13.648	11.487	9.684	12.726	14.563	13.952	13.674	12.336		8.968							
4/4/2007	12:00	13.634	11.474	9.674	12.72	14.547	13.938	13.669	12.316		8.948							
4/4/2007	16:00	13.603	11.474	9.658	12.702	14.52	13.914	13.65	12.301		8.926							
4/4/2007	20:00	13.593	11.46	9.639	12.677	14.494	13.896	13.626	12.284		8.905							
4/5/2007	0:00	13.573	11.453	9.623	12.658	14.48	13.879	13.614	12.269		8.891							
4/5/2007	4:00	13.552	11.443	9.608	12.64	14.464	13.86	13.602	12.256		8.875							
4/5/2007	8:00	13.528	11.433	9.594	12.621	14.443	13.845	13.588	12.237		8.855							
4/5/2007	12:00	13.515	11.426	9.582	12.613	14.441	13.833	13.574	12.222		8.84							
4/5/2007	16:00	13.499	11.418	9.57	12.599	14.44	13.814	13.557	12.205		8.822							
4/5/2007	20:00	13.468	11.404	9.551	12.576	14.419	13.801	13.538	12.194		8.806							
4/6/2007	0:00	13.462	11.395	9.541	12.56	14.395	13.788	13.528	12.185		8.792							
4/6/2007	4:00	13.448	11.389	9.526	12.545	14.376	13.776	13.516	12.175		8.779							
4/6/2007	8:00	13.433	11.379	9.516	12.533	14.369	13.768	13.509	12.16		8.767							
4/6/2007	12:00	13.436	11.377	9.508	12.535	14.366	13.772	13.507	12.151		8.759							
4/6/2007	16:00	13.421	11.373	9.502	12.543	14.344	13.755	13.495	12.145		8.751							
4/6/2007	20:00	13.415	11.366	9.49	12.529	14.332	13.744	13.48	12.147		8.747							
4/7/2007	0:00	13.403	11.362	9.484	12.512	14.323	13.734	13.471	12.136		8.741							
4/7/2007	4:00	13.389	11.356	9.473	12.5	14.308	13.721	13.466	12.128		8.731							
4/7/2007	8:00	13.381	11.35	9.465	12.486	14.294	13.711	13.454	12.113		8.721							
4/7/2007	12:00	13.368	11.348	9.459	12.473	14.283	13.702	13.444	12.102		8.712							
4/7/2007	16:00	13.352	11.342	9.449	12.459	14.265	13.694	13.435	12.098		8.696							
4/7/2007	20:00	13.34	11.331	9.438	12.445	14.254	13.681	13.423	12.089		8.688							
4/8/2007	0:00	13.33	11.325	9.428	12.436	14.248	13.671	13.413	12.078		8.684							
4/8/2007	4:00	13.315	11.319	9.422	12.428	14.24	13.665	13.406	12.072		8.676							
4/8/2007	8:00	13.311	11.315	9.416	12.42	14.232	13.658	13.401	12.061		8.668							
4/8/2007	12:00	13.299	11.314	9.408	12.408	14.224	13.654	13.396	12.052		8.66							
4/8/2007	16:00	13.287	11.31	9.402	12.397	14.211	13.646	13.389	12.05		8.647							
4/8/2007	20:00	13.283	11.302	9.391	12.387	14.201	13.635	13.377	12.042		8.645							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
4/9/2007	0:00	13.272	11.296	9.383	12.383	14.196	13.631	13.372	12.035		8.639							
4/9/2007	4:00	13.262	11.29	9.377	12.373	14.188	13.623	13.363	12.029		8.631							
4/9/2007	8:00	13.252	11.286	9.369	12.362	14.179	13.618	13.358	12.018		8.625							
4/9/2007	12:00	13.244	11.283	9.363	12.358	14.175	13.616	13.353	12.016		8.615							
4/9/2007	16:00	13.232	11.277	9.357	12.348	14.164	13.612	13.344	12.007		8.609							
4/9/2007	20:00	13.227	11.271	9.346	12.34	14.156	13.608	13.334	12.005		8.603							
4/10/2007	0:00	13.219	11.265	9.338	12.332	14.15	13.6	13.327	11.999		8.597							
4/10/2007	4:00	13.207	11.257	9.33	12.323	14.139	13.591	13.315	11.992		8.591							
4/10/2007	8:00	13.197	11.247	9.32	12.319	14.126	13.583	13.308	11.984		8.584							
4/10/2007	12:00	13.191	11.232	9.301	12.301	14.103	13.574	13.286	11.973		8.572							
4/10/2007	16:00	13.209	11.201	9.262	12.276	14.062	13.629	13.243	11.939		8.552							
4/10/2007	20:00	13.207	11.167	9.25	12.251	14.026	13.648	13.207	11.909		8.53							
4/11/2007	0:00	13.176	11.137	9.23	12.225	13.996	13.675	13.176	11.868		8.538							
4/11/2007	4:00	13.158	11.091	9.16	12.184	13.948	13.696	13.126	11.814		8.548							
4/11/2007	8:00	13.117	11.051	9.088	12.147	13.914	13.738	13.076	11.763		8.528							
4/11/2007	12:00	13.013	11.01	9.003	12.118	13.895	13.644	13.042	11.739		8.495							
4/11/2007	16:00	12.991	10.964	8.942	12.093	13.868	13.377	13.001	11.727		8.426							
4/11/2007	20:00	12.972	10.917	8.882	12.062	13.844	13.35	12.968	11.709		8.333							
4/12/2007	0:00	12.946	10.871	8.833	12.028	13.82	13.316	12.927	11.688		8.28							
4/12/2007	4:00	12.915	10.825	8.79	11.993	13.788	13.285	12.886	11.66		8.233							
4/12/2007	8:00	12.886	10.788	8.747	11.964	13.764	13.255	12.853	11.634		8.194							
4/12/2007	12:00	12.862	10.751	8.714	11.943	13.736	13.228	12.819	11.615		8.158							
4/12/2007	16:00	12.831	10.716	8.687	11.919	13.699	13.194	12.779	11.585		8.121							
4/12/2007	20:00	12.817	10.684	8.657	11.89	13.672	13.165	12.745	11.566		8.091							
4/13/2007	0:00	12.792	10.655	8.626	11.863	13.648	13.138	12.714	11.542		8.062							
4/13/2007	4:00	12.762	10.624	8.595	11.832	13.618	13.106	12.678	11.514		8.028							
4/13/2007	8:00	12.733	10.599	8.569	11.806	13.587	13.077	12.649	11.491		7.995							
4/13/2007	12:00	12.705	10.574	8.542	11.793	13.546	13.041	12.616	11.463		7.967							
4/13/2007	16:00	12.676	10.546	8.511	11.779	13.507	13.001	12.585	11.431		7.938							
4/13/2007	20:00	12.656	10.521	8.485	11.754	13.48	12.978	12.549	11.409		7.914							
4/14/2007	0:00	12.629	10.49	8.45	11.717	13.449	12.947	12.515	11.379		7.896							
4/14/2007	4:00	12.627	10.456	8.413	11.678	13.411	12.924	12.472	11.347		7.867							
4/14/2007	8:00	12.562	10.428	8.383	11.651	13.379	12.911	12.441	11.319		7.843							
4/14/2007	12:00	12.531	10.405	8.354	11.621	13.347	12.859	12.41	11.293		7.865							
4/14/2007	16:00	12.502	10.378	8.321	11.588	13.311	12.829	12.377	11.27		7.768							
4/14/2007	20:00	12.484	10.351	8.29	11.565	13.292	12.802	12.35	11.248		7.743							
4/15/2007	0:00	12.462	10.328	8.264	11.545	13.273	12.779	12.328	11.229		7.723							
4/15/2007	4:00	12.435	10.303	8.235	11.516	13.249	12.749	12.305	11.203		7.695							
4/15/2007	8:00	12.412	10.282	8.211	11.491	13.228	12.728	12.285	11.18		7.67							
4/15/2007	12:00	12.388	10.27	8.192	11.477	13.209	12.714	12.274	11.16		7.646							
4/15/2007	16:00	12.366	10.253	8.174	11.454	13.185	12.689	12.254	11.143		7.622							
4/15/2007	20:00	12.357	10.232	8.153	11.436	13.166	12.668	12.233	11.124		7.605							
4/16/2007	0:00	12.337	10.218	8.135	11.417	13.151	12.651	12.216	11.107		7.591							
4/16/2007	4:00	12.312	10.202	8.117	11.399	13.132	12.628	12.2	11.09		7.571							
4/16/2007	8:00	12.292	10.189	8.1	11.38	13.114	12.611	12.183	11.068		7.552							
4/16/2007	12:00	12.269	10.181	8.088	11.364	13.095	12.598	12.171	11.058		7.534							
4/16/2007	16:00	12.245	10.166	8.069	11.341	13.073	12.579	12.149	11.038		7.512							
4/16/2007	20:00	12.245	10.15	8.051	11.329	13.057	12.565	12.13	11.032		7.502							
4/17/2007	0:00	12.229	10.141	8.036	11.312	13.045	12.55	12.118	11.019		7.491							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
4/17/2007	4:00	12.208	10.127	8.02	11.298	13.026	12.531	12.101	11.002		7.475							
4/17/2007	8:00	12.184	10.114	8.006	11.28	13.007	12.516	12.087	10.985		7.461							
4/17/2007	12:00	12.163	10.108	7.993	11.265	12.989	12.5	12.075	10.965		7.447							
4/17/2007	16:00	12.147	10.096	7.979	11.247	12.97	12.483	12.051	10.955		7.433							
4/17/2007	20:00	12.143	10.085	7.961	11.236	12.959	12.47	12.039	10.946		7.42							
4/18/2007	0:00	12.131	10.077	7.953	11.226	12.956	12.462	12.034	10.937		7.414							
4/18/2007	4:00	12.114	10.067	7.942	11.216	12.941	12.449	12.025	10.925		7.402							
4/18/2007	8:00	12.096	10.061	7.932	11.201	12.932	12.439	12.015	10.912		7.392							
4/18/2007	12:00	12.09	10.061	7.928	11.206	12.912	12.432	12.01	10.903		7.382							
4/18/2007	16:00	12.075	10.057	7.922	11.197	12.908	12.428	12.003	10.909		7.376							
4/18/2007	20:00	12.086	10.05	7.916	11.187	12.903	12.414	11.993	10.899		7.374							
4/19/2007	0:00	12.073	10.047	7.91	11.183	12.901	12.409	11.993	10.892		7.37							
4/19/2007	4:00	12.063	10.044	7.903	11.173	12.898	12.403	11.988	10.886		7.364							
4/19/2007	8:00	12.051	10.044	7.902	11.169	12.893	12.397	11.986	10.875		7.359							
4/19/2007	12:00	12.043	10.046	7.9	11.164	12.887	12.397	11.986	10.871		7.353							
4/19/2007	16:00	12.028	10.046	7.898	11.156	12.877	12.388	11.984	10.871		7.345							
4/19/2007	20:00	12.041	10.046	7.893	11.15	12.877	12.386	11.979	10.869		7.345							
4/20/2007	0:00	12.035	10.046	7.891	11.152	12.882	12.384	11.982	10.862		7.345							
4/20/2007	4:00	12.031	10.048	7.893	11.148	12.883	12.384	11.984	10.86		7.343							
4/20/2007	8:00	12.022	10.05	7.893	11.144	12.885	12.388	11.986	10.86		7.341							
4/20/2007	12:00	12.014	10.058	7.895	11.146	12.882	12.386	11.994	10.856		7.339							
4/20/2007	16:00	12.014	10.06	7.895	11.144	12.874	12.388	11.991	10.86		7.337							
4/20/2007	20:00	12.031	10.061	7.898	11.142	12.874	12.388	11.986	10.862		7.343							
4/21/2007	0:00	12.026	10.061	7.895	11.142	12.879	12.39	11.989	10.862		7.345							
4/21/2007	4:00	12.018	10.061	7.893	11.14	12.879	12.388	11.989	10.86		7.345							
4/21/2007	8:00	12.012	10.063	7.893	11.136	12.879	12.39	11.986	10.86		7.345							
4/21/2007	12:00	12.004	10.065	7.893	11.134	12.875	12.395	11.991	10.854		7.339							
4/21/2007	16:00	11.998	10.067	7.893	11.134	12.871	12.395	11.986	10.867		7.337							
4/21/2007	20:00	12.014	10.069	7.889	11.132	12.871	12.395	11.984	10.867		7.345							
4/22/2007	0:00	12.004	10.065	7.887	11.125	12.871	12.395	11.979	10.865		7.345							
4/22/2007	4:00	11.998	10.063	7.883	11.125	12.867	12.393	11.979	10.862		7.343							
4/22/2007	8:00	11.99	10.059	7.877	11.119	12.856	12.388	11.97	10.858		7.339							
4/22/2007	12:00	11.977	10.057	7.873	11.113	12.85	12.386	11.965	10.856		7.335							
4/22/2007	16:00	11.979	10.055	7.867	11.111	12.85	12.386	11.958	10.858		7.337							
4/22/2007	20:00	11.984	10.055	7.862	11.113	12.856	12.395	11.963	10.86		7.341							
4/23/2007	0:00	11.988	10.057	7.862	11.113	12.871	12.399	11.972	10.862		7.345							
4/23/2007	4:00	11.988	10.063	7.871	11.115	12.879	12.403	11.984	10.867		7.345							
4/23/2007	8:00	11.994	10.073	7.877	11.125	12.895	12.411	12.001	10.873		7.351							
4/23/2007	12:00	11.996	10.085	7.887	11.127	12.9	12.42	12.015	10.873		7.353							
4/23/2007	16:00	11.994	10.096	7.893	11.127	12.906	12.428	12.025	10.888		7.351							
4/23/2007	20:00	12.018	10.102	7.901	11.134	12.914	12.437	12.03	10.895		7.366							
4/24/2007	0:00	12.018	10.108	7.908	11.142	12.92	12.441	12.032	10.899		7.37							
4/24/2007	4:00	12.004	10.098	7.901	11.127	12.904	12.443	12.022	10.892		7.364							
4/24/2007	8:00	11.998	10.102	7.9	11.132	12.898	12.435	12.02	10.89		7.361							
4/24/2007	12:00	11.998	10.102	7.896	11.127	12.898	12.435	12.015	10.897		7.364							
4/24/2007	16:00	11.998	10.098	7.892	11.125	12.883	12.437	12.01	10.897		7.361							
4/24/2007	20:00	11.992	10.09	7.877	11.119	12.879	12.407	11.996	10.888		7.351							
4/25/2007	0:00	11.992	10.088	7.875	11.115	12.883	12.388	11.998	10.888		7.355							
4/25/2007	4:00	11.984	10.076	7.865	11.105	12.872	12.401	11.989	10.882		7.359							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
4/25/2007	8:00	11.986	10.073	7.863	11.103	12.875	12.378	11.991	10.882		7.355							
4/25/2007	12:00	11.982	10.073	7.86	11.109	12.879	12.365	11.996	10.886		7.355							
4/25/2007	16:00	11.979	10.067	7.862	11.101	12.882	12.409	11.998	10.886		7.359							
4/25/2007	20:00	11.986	10.059	7.854	11.093	12.877	12.405	11.994	10.882		7.353							
4/26/2007	0:00	11.965	10.057	7.85	11.09	12.885	12.359	11.996	10.882		7.337							
4/26/2007	4:00	11.975	10.049	7.85	11.087	12.88	12.34	11.998	10.877		7.341							
4/26/2007	8:00	11.975	10.054	7.852	11.084	12.887	12.334	12.003	10.88		7.337							
4/26/2007	12:00	11.974	10.055	7.856	11.084	12.895	12.393	12.013	10.882		7.357							
4/26/2007	16:00	11.976	10.053	7.857	11.084	12.893	12.449	12.015	10.884		7.355							
4/26/2007	20:00	11.981	10.057	7.863	11.084	12.896	12.432	12.022	10.888		7.359							
4/27/2007	0:00	11.984	10.059	7.863	11.088	12.903	12.443	12.027	10.89		7.361							
4/27/2007	4:00	11.979	10.061	7.862	11.088	12.904	12.445	12.03	10.89		7.361							
4/27/2007	8:00	11.98	10.065	7.863	11.088	12.908	12.451	12.034	10.892		7.361							
4/27/2007	12:00	11.961	10.071	7.867	11.097	12.914	12.466	12.044	10.895		7.366							
4/27/2007	16:00	11.971	10.071	7.863	11.097	12.908	12.523	12.044	10.892		7.368							
4/27/2007	20:00	11.988	10.078	7.867	11.103	12.921	12.479	12.054	10.899		7.366							
4/28/2007	0:00	11.994	10.082	7.873	11.109	12.935	12.441	12.068	10.905		7.376							
4/28/2007	4:00	11.996	10.088	7.877	11.109	12.94	12.464	12.073	10.91		7.378							
4/28/2007	8:00	12	10.096	7.883	11.113	12.951	12.483	12.082	10.916		7.384							
4/28/2007	12:00	12	10.105	7.889	11.121	12.954	12.506	12.099	10.92		7.386							
4/28/2007	16:00	12	10.113	7.895	11.121	12.957	12.506	12.109	10.933		7.388							
4/28/2007	20:00	12.024	10.117	7.9	11.13	12.967	12.514	12.116	10.937		7.402							
4/29/2007	0:00	12.028	10.121	7.903	11.138	12.973	12.521	12.121	10.942		7.412							
4/29/2007	4:00	12.024	10.123	7.901	11.138	12.976	12.525	12.121	10.946		7.414							
4/29/2007	8:00	12.024	10.129	7.904	11.142	12.981	12.533	12.128	10.95		7.418							
4/29/2007	12:00	12.019	10.134	7.905	11.144	12.98	12.537	12.135	10.952		7.418							
4/29/2007	16:00	12.02	10.134	7.906	11.146	12.984	12.546	12.2	10.967		7.42							
4/29/2007	20:00	12.047	10.134	7.906	11.152	12.994	12.554	12.209	10.97		7.435							
4/30/2007	0:00	12.051	10.136	7.908	11.158	13.009	12.563	12.197	10.974		7.443							
4/30/2007	4:00	12.047	10.134	7.908	11.158	13.01	12.567	12.188	10.976		7.445							
4/30/2007	8:00	12.043	10.136	7.906	11.156	13.012	12.571	12.183	10.98		7.445							
4/30/2007	12:00	12.039	10.138	7.905	11.162	13.01	12.573	12.185	10.974		7.451							
4/30/2007	16:00	12.039	10.136	7.903	11.162	13.01	12.577	12.18	10.989		7.453							
4/30/2007	20:00	12.061	10.133	7.901	11.167	13.015	12.586	12.176	10.995		7.461							
5/1/2007	0:00	12.064	10.134	7.904	11.171	13.026	12.592	12.183	11		7.467							
5/1/2007	4:00	12.064	10.133	7.904	11.173	13.031	12.596	12.18	11.004		7.469							
5/1/2007	8:00	12.064	10.134	7.905	11.173	13.034	12.602	12.183	11.006		7.471							
5/1/2007	12:00	12.066	10.138	7.91	11.177	13.045	12.611	12.195	11.008		7.469							
5/1/2007	16:00	12.068	10.142	7.91	11.187	13.041	12.611	12.2	11.015		7.485							
5/1/2007	20:00	12.08	10.144	7.912	11.187	13.042	12.607	12.202	11.021		7.485							
5/2/2007	0:00	12.088	10.15	7.92	11.193	13.055	12.619	12.212	11.025		7.494							
5/2/2007	4:00	12.088	10.154	7.924	11.195	13.061	12.626	12.214	11.03		7.498							
5/2/2007	8:00	12.09	10.158	7.928	11.199	13.069	12.632	12.219	11.034		7.487							
5/2/2007	12:00	12.094	10.168	7.932	11.21	13.073	12.642	12.231	11.036		7.494							
5/2/2007	16:00	12.098	10.168	7.936	11.216	13.074	12.642	12.233	11.045		7.518							
5/2/2007	20:00	12.109	10.17	7.937	11.218	13.076	12.644	12.233	11.051		7.52							
5/3/2007	0:00	12.113	10.174	7.939	11.22	13.084	12.653	12.24	11.055		7.526							
5/3/2007	4:00	12.111	10.17	7.935	11.216	13.082	12.659	12.236	11.058		7.524							
5/3/2007	8:00	12.111	10.172	7.935	11.214	13.089	12.659	12.24	11.062		7.524							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
5/3/2007	12:00	12.117	10.175	7.941	11.222	13.095	12.678	12.245	11.068		7.53							
5/3/2007	16:00	12.119	10.175	7.938	11.227	13.092	12.703	12.245	11.073		7.532							
5/3/2007	20:00	12.117	10.168	7.93	11.216	13.087	12.739	12.236	11.075		7.528							
5/4/2007	0:00	12.143	10.143	7.905	11.201	13.065	12.726	12.214	11.06		7.514							
5/4/2007	4:00	12.139	10.137	7.92	11.195	13.065	12.726	12.207	11.043		7.51							
5/4/2007	8:00	12.105	10.128	7.9	11.191	13.062	12.72	12.2	11.038		7.51							
5/4/2007	12:00	12.092	10.119	7.883	11.187	13.058	12.749	12.204	11.04		7.514							
5/4/2007	16:00	12.09	10.112	7.869	11.183	13.05	12.647	12.202	11.04		7.498							
5/4/2007	20:00	12.102	10.1	7.852	11.181	13.047	12.647	12.195	11.043		7.494							
5/5/2007	0:00	12.098	10.09	7.838	11.177	13.049	12.644	12.197	11.04		7.485							
5/5/2007	4:00	12.09	10.081	7.824	11.164	13.042	12.642	12.192	11.034		7.475							
5/5/2007	8:00	12.08	10.069	7.811	11.154	13.036	12.636	12.188	11.027		7.483							
5/5/2007	12:00	12.074	10.067	7.804	11.142	13.033	12.638	12.19	11.023		7.477							
5/5/2007	16:00	12.072	10.063	7.797	11.13	13.026	12.638	12.192	11.025		7.471							
5/5/2007	20:00	12.077	10.058	7.789	11.125	13.034	12.638	12.192	11.023		7.471							
5/6/2007	0:00	12.047	10.034	7.801	11.06	12.956	12.611	12.123	10.97		7.449							
5/6/2007	4:00	12.019	9.951	7.66	11.019	12.943	12.531	12.042	10.903		7.404							
5/6/2007	8:00	12.055	9.803	7.275	10.926	12.861	12.817	11.791	10.807		7.364							
5/6/2007	12:00	11.976	9.662	7.114	10.866	12.783	12.752	11.546	10.779		7.325							
5/6/2007	16:00	11.927	9.505	6.854	10.784	12.683	12.701	11.273	10.725		7.296							
5/6/2007	20:00	11.782	9.329	6.512	10.692	12.558	12.563	10.998	10.659		7.28							
5/7/2007	0:00	11.786	9.122	6.33	10.569	12.42	12.439	10.727	10.573		7.238							
5/7/2007	4:00	11.69	8.904	6	10.445	12.263	12.321	10.464	10.472		7.191							
5/7/2007	8:00	11.518	8.709	5.724	10.337	12.136	12.13	10.234	10.369		7.026							
5/7/2007	12:00	11.416	8.523	5.419	10.248	12.024	12.046	10.047	10.298		6.876							
5/7/2007	16:00	11.33	8.349	5.2	10.146	11.886	11.717	9.875	10.221		6.778							
5/7/2007	20:00	11.255	8.181	4.913	10.038	11.753	11.603	9.712	10.144		6.626							
5/8/2007	0:00	11.163	8.025	4.698	9.93	11.633	11.492	9.564	10.062		6.496							
5/8/2007	4:00	11.067	7.882	4.512	9.823	11.516	11.381	9.43	9.979		6.378							
5/8/2007	8:00	10.973	7.746	4.313	9.72	11.402	11.276	9.303	9.895		6.266							
5/8/2007	12:00	10.871	7.627	4.223	9.617	11.288	11.171	9.19	9.812		6.114							
5/8/2007	16:00	10.785	7.513	4.149	9.523	11.179	11.064	9.082	9.734		5.767							
5/8/2007	20:00	10.72	7.406	3.998	9.437	11.082	10.965	8.977	9.655		5.673							
5/9/2007	0:00	10.634	7.31	3.887	9.344	10.989	10.871	8.881	9.573		5.578							
5/9/2007	4:00	10.544	7.221	3.795	9.256	10.897	10.778	8.797	9.498		5.486							
5/9/2007	8:00	10.458	7.141	3.726	9.176	10.812	10.69	8.718	9.423		5.397							
5/9/2007	12:00	10.368	7.072	3.644	9.095	10.726	10.606	8.651	9.348		5.307							
5/9/2007	16:00	10.303	7.004	3.574	9.028	10.649	10.531	8.587	9.284		5.232							
5/9/2007	20:00	10.244	6.94	3.515	8.96	10.58	10.453	8.524	9.22		5.163							
5/10/2007	0:00	10.174	6.884	3.457	8.888	10.516	10.378	8.467	9.155		5.092							
5/10/2007	4:00	10.102	6.834	3.408	8.818	10.45	10.304	8.417	9.091		5.023							
5/10/2007	8:00	10.035	6.79	3.365	8.754	10.392	10.239	8.374	9.031		4.96							
5/10/2007	12:00	9.962	6.755	3.331	8.701	10.33	10.172	8.335	8.964		4.893							
5/10/2007	16:00	9.902	6.718	3.298	8.645	10.27	10.107	8.302	8.919		4.837							
5/10/2007	20:00	9.874	6.686	3.271	8.602	10.227	10.057	8.268	8.868		4.793							
5/11/2007	0:00	9.823	6.658	3.249	8.553	10.186	10.002	8.237	8.816		4.747							
5/11/2007	4:00	9.765	6.633	3.23	8.503	10.141	9.954	8.206	8.769		4.698							
5/11/2007	8:00	9.716	6.616	3.216	8.462	10.1	9.903	8.182	8.724		4.653							
5/11/2007	12:00	9.657	6.6	3.206	8.423	10.057	9.857	8.165	8.681		4.607							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
5/11/2007	16:00	9.618	6.589	3.197	8.397	10.022	9.817	8.148	8.651		4.572							
5/11/2007	20:00	9.606	6.577	3.195	8.378	9.996	9.786	8.129	8.619		4.552							
5/12/2007	0:00	9.569	6.569	3.197	8.341	9.97	9.752	8.115	8.583		4.523							
5/12/2007	4:00	9.526	6.56	3.195	8.304	9.94	9.714	8.101	8.546		4.491							
5/12/2007	8:00	9.492	6.556	3.197	8.277	9.913	9.685	8.091	8.516		4.464							
5/12/2007	12:00	9.443	6.556	3.197	8.251	9.879	9.649	8.081	8.482		4.432							
5/12/2007	16:00	9.408	6.554	3.199	8.224	9.852	9.626	8.069	8.473		4.405							
5/12/2007	20:00	9.412	6.55	3.206	8.207	9.839	9.605	8.062	8.443		4.397							
5/13/2007	0:00	9.388	6.548	3.212	8.187	9.823	9.584	8.055	8.417		4.383							
5/13/2007	4:00	9.355	6.548	3.218	8.164	9.799	9.557	8.043	8.392		4.363							
5/13/2007	8:00	9.326	6.552	3.224	8.146	9.783	9.536	8.038	8.37		4.346							
5/13/2007	12:00	9.289	6.554	3.23	8.129	9.756	9.513	8.036	8.347		4.324							
5/13/2007	16:00	9.259	6.554	3.23	8.111	9.732	9.494	8.024	8.336		4.308							
5/13/2007	20:00	9.263	6.552	3.238	8.103	9.721	9.481	8.019	8.319		4.306							
5/14/2007	0:00	9.244	6.556	3.245	8.09	9.709	9.467	8.014	8.299		4.302							
5/14/2007	4:00	9.216	6.556	3.249	8.07	9.69	9.444	8.005	8.28		4.285							
5/14/2007	8:00	9.193	6.558	3.255	8.062	9.674	9.429	7.998	8.263		4.277							
5/14/2007	12:00	9.171	6.565	3.261	8.065	9.655	9.412	7.995	8.246		4.267							
5/14/2007	16:00	9.151	6.569	3.267	8.064	9.64	9.4	7.988	8.237		4.261							
5/14/2007	20:00	9.155	6.571	3.275	8.057	9.629	9.393	7.981	8.233		4.263							
5/15/2007	0:00	9.142	6.579	3.285	8.047	9.626	9.385	7.983	8.222		4.263							
5/15/2007	4:00	9.112	6.565	3.277	8.016	9.597	9.334	7.959	8.19		4.245							
5/15/2007	8:00	9.093	6.565	3.283	8.002	9.588	9.253	7.957	8.173		4.214							
5/15/2007	12:00	9.087	6.577	3.3	8.002	9.589	9.173	7.966	8.16		4.202							
5/15/2007	16:00	9.075	6.587	3.314	7.998	9.579	9.305	7.971	8.158		4.224							
5/15/2007	20:00	9.069	6.596	3.326	7.99	9.575	9.324	7.976	8.151		4.222							
5/16/2007	0:00	9.061	6.608	3.343	7.985	9.575	9.32	7.986	8.147		4.224							
5/16/2007	4:00	9.05	6.614	3.353	7.977	9.57	9.313	7.988	8.141		4.222							
5/16/2007	8:00	9.044	6.625	3.365	7.975	9.565	9.311	7.993	8.132		4.218							
5/16/2007	12:00	9.032	6.639	3.378	7.981	9.56	9.309	8.002	8.128		4.214							
5/16/2007	16:00	9.022	6.645	3.388	7.977	9.551	9.301	8.005	8.132		4.212							
5/16/2007	20:00	9.032	6.651	3.394	7.977	9.547	9.299	7.998	8.13		4.22							
5/17/2007	0:00	9.024	6.66	3.408	7.979	9.552	9.299	8.002	8.124		4.224							
5/17/2007	4:00	9.018	6.67	3.419	7.979	9.555	9.297	8.012	8.121		4.229							
5/17/2007	8:00	9.014	6.683	3.431	7.983	9.557	9.297	8.019	8.119		4.231							
5/17/2007	12:00	9.007	6.703	3.449	7.996	9.557	9.297	8.036	8.119		4.235							
5/17/2007	16:00	9.005	6.714	3.462	8	9.555	9.297	8.038	8.128		4.233							
5/17/2007	20:00	9.018	6.72	3.474	8.002	9.555	9.299	8.038	8.126		4.245							
5/18/2007	0:00	9.016	6.73	3.486	8.008	9.558	9.303	8.043	8.126		4.253							
5/18/2007	4:00	9.012	6.738	3.498	8.006	9.555	9.301	8.045	8.124		4.255							
5/18/2007	8:00	9.001	6.743	3.507	8.006	9.552	9.301	8.045	8.121		4.259							
5/18/2007	12:00	8.999	6.759	3.515	8.018	9.551	9.305	8.055	8.121		4.263							
5/18/2007	16:00	8.993	6.765	3.525	8.023	9.546	9.309	8.055	8.13		4.265							
5/18/2007	20:00	9.007	6.768	3.529	8.027	9.546	9.309	8.053	8.132		4.275							
5/19/2007	0:00	9.007	6.772	3.535	8.029	9.551	9.311	8.053	8.134		4.281							
5/19/2007	4:00	9.001	6.778	3.543	8.029	9.55	9.311	8.055	8.134		4.285							
5/19/2007	8:00	8.997	6.784	3.548	8.029	9.549	9.311	8.055	8.132		4.287							
5/19/2007	12:00	8.993	6.796	3.556	8.033	9.544	9.316	8.074	8.132		4.29							
5/19/2007	16:00	8.997	6.805	3.564	8.037	9.546	9.32	8.084	8.147		4.294							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
5/19/2007	20:00	9.007	6.807	3.57	8.045	9.551	9.322	8.079	8.149		4.304							
5/20/2007	0:00	9.007	6.813	3.578	8.049	9.559	9.326	8.084	8.149		4.31							
5/20/2007	4:00	9.005	6.821	3.589	8.049	9.562	9.328	8.084	8.151		4.314							
5/20/2007	8:00	9.003	6.828	3.595	8.049	9.56	9.332	8.084	8.154		4.318							
5/20/2007	12:00	8.997	6.838	3.601	8.051	9.555	9.33	8.091	8.154		4.316							
5/20/2007	16:00	9.001	6.846	3.611	8.06	9.555	9.339	8.096	8.164		4.324							
5/20/2007	20:00	9.016	6.85	3.619	8.066	9.56	9.343	8.093	8.171		4.336							
5/21/2007	0:00	9.018	6.857	3.625	8.072	9.568	9.349	8.096	8.173		4.344							
5/21/2007	4:00	9.016	6.865	3.636	8.076	9.57	9.349	8.101	8.177		4.348							
5/21/2007	8:00	9.012	6.871	3.644	8.078	9.571	9.349	8.105	8.175		4.353							
5/21/2007	12:00	9.01	6.881	3.648	8.082	9.566	9.372	8.11	8.177		4.355							
5/21/2007	16:00	9.016	6.892	3.658	8.084	9.568	9.362	8.113	8.188		4.361							
5/21/2007	20:00	9.03	6.9	3.666	8.094	9.574	9.37	8.113	8.199		4.375							
5/22/2007	0:00	9.03	6.904	3.674	8.101	9.579	9.372	8.117	8.201		4.381							
5/22/2007	4:00	9.03	6.911	3.681	8.101	9.582	9.374	8.12	8.203		4.387							
5/22/2007	8:00	9.03	6.921	3.691	8.105	9.586	9.379	8.124	8.207		4.391							
5/22/2007	12:00	9.034	6.931	3.699	8.113	9.592	9.387	8.132	8.214		4.399							
5/22/2007	16:00	9.032	6.942	3.711	8.117	9.59	9.391	8.141	8.22		4.403							
5/22/2007	20:00	9.054	6.952	3.722	8.123	9.6	9.4	8.148	8.229		4.415							
5/23/2007	0:00	9.059	6.962	3.734	8.134	9.613	9.406	8.16	8.235		4.426							
5/23/2007	4:00	9.061	6.973	3.748	8.14	9.623	9.416	8.17	8.244		4.434							
5/23/2007	8:00	9.063	6.989	3.765	8.146	9.631	9.423	8.18	8.25		4.444							
5/23/2007	12:00	9.069	7	3.779	8.162	9.643	9.431	8.199	8.257		4.45							
5/23/2007	16:00	9.085	7.02	3.799	8.173	9.653	9.448	8.213	8.267		4.464							
5/23/2007	20:00	9.097	7.029	3.816	8.181	9.661	9.446	8.223	8.282		4.47							
5/24/2007	0:00	9.097	7.027	3.82	8.179	9.661	9.441	8.223	8.28		4.472							
5/24/2007	4:00	9.065	6.985	3.791	8.154	9.615	9.404	8.177	8.233		4.432							
5/24/2007	8:00	9.01	6.89	3.615	8.072	9.528	9.37	7.99	8.124		4.444							
5/24/2007	12:00	8.987	6.842	3.548	8.051	9.504	9.259	7.847	8.128		4.405							
5/24/2007	16:00	8.971	6.768	3.457	8.016	9.456	9.347	7.722	8.113		4.434							
5/24/2007	20:00	8.965	6.689	3.351	7.979	9.408	9.284	7.612	8.104		4.326							
5/25/2007	0:00	8.94	6.606	3.251	7.934	9.358	9.244	7.519	8.081		4.273							
5/25/2007	4:00	8.911	6.527	3.161	7.883	9.303	9.198	7.437	8.051		4.231							
5/25/2007	8:00	8.879	6.451	3.079	7.838	9.254	9.156	7.363	8.016		4.2							
5/25/2007	12:00	8.84	6.378	3.007	7.796	9.198	9.106	7.301	7.98		4.133							
5/25/2007	16:00	8.815	6.308	2.942	7.753	9.146	9.062	7.238	7.95		4.088							
5/25/2007	20:00	8.787	6.243	2.884	7.714	9.103	9.015	7.186	7.92		4.052							
5/26/2007	0:00	8.748	6.183	2.835	7.673	9.06	8.967	7.138	7.883		4.011							
5/26/2007	4:00	8.711	6.127	2.788	7.63	9.018	8.923	7.097	7.845		3.97							
5/26/2007	8:00	8.676	6.08	2.749	7.591	8.983	8.881	7.061	7.81		3.936							
5/26/2007	12:00	8.636	6.024	2.737	7.546	8.941	8.856	7.028	7.774		3.901							
5/26/2007	16:00	8.599	5.98	2.661	7.511	8.903	8.927	6.992	7.735		3.938							
5/26/2007	20:00	8.574	5.941	2.628	7.474	8.87	8.772	6.956	7.705		3.819							
5/27/2007	0:00	8.546	5.906	2.598	7.443	8.848	8.717	6.932	7.677		3.792							
5/27/2007	4:00	8.517	5.873	2.569	7.41	8.823	8.682	6.906	7.647		3.759							
5/27/2007	8:00	8.493	5.844	2.546	7.381	8.8	8.65	6.889	7.622		3.733							
5/27/2007	12:00	8.462	5.823	2.526	7.354	8.776	8.621	6.877	7.594		3.703							
5/27/2007	16:00	8.433	5.8	2.503	7.328	8.744	8.587	6.855	7.57		3.672							
5/27/2007	20:00	8.425	5.777	2.491	7.305	8.726	8.564	6.838	7.551		3.654							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
5/28/2007	0:00	8.403	5.761	2.483	7.285	8.713	8.541	6.829	7.532		3.64							
5/28/2007	4:00	8.374	5.746	2.475	7.26	8.691	8.511	6.817	7.508		3.617							
5/28/2007	8:00	8.352	5.734	2.471	7.241	8.672	8.488	6.81	7.484		3.599							
5/28/2007	12:00	8.329	5.723	2.464	7.225	8.651	8.467	6.805	7.467		3.58							
5/28/2007	16:00	8.305	5.715	2.46	7.202	8.628	8.442	6.795	7.448		3.558							
5/28/2007	20:00	8.298	5.703	2.46	7.186	8.617	8.43	6.795	7.433		3.552							
5/29/2007	0:00	8.286	5.7	2.462	7.18	8.612	8.415	6.798	7.418		3.544							
5/29/2007	4:00	8.264	5.696	2.469	7.163	8.599	8.396	6.798	7.401		3.534							
5/29/2007	8:00	8.241	5.694	2.475	7.153	8.59	8.383	6.798	7.386		3.523							
5/29/2007	12:00	8.233	5.698	2.483	7.145	8.579	8.369	6.807	7.377		3.517							
5/29/2007	16:00	8.221	5.69	2.485	7.128	8.553	8.339	6.8	7.36		3.503							
5/29/2007	20:00	8.207	5.688	2.489	7.122	8.545	8.333	6.801	7.345		3.495							
5/30/2007	0:00	8.198	5.69	2.499	7.116	8.542	8.327	6.8	7.336		3.495							
5/30/2007	4:00	8.184	5.69	2.505	7.106	8.535	8.316	6.8	7.328		3.491							
5/30/2007	8:00	8.155	5.672	2.495	7.087	8.505	8.323	6.779	7.302		3.499							
5/30/2007	12:00	8.147	5.671	2.497	7.085	8.497	8.31	6.771	7.293		3.495							
5/30/2007	16:00	8.133	5.667	2.487	7.077	8.479	8.274	6.76	7.287		3.467							
5/30/2007	20:00	8.133	5.665	2.481	7.071	8.471	8.266	6.75	7.281		3.46							
5/31/2007	0:00	8.129	5.667	2.481	7.069	8.474	8.264	6.75	7.278		3.46							
5/31/2007	4:00	8.119	5.665	2.479	7.058	8.466	8.254	6.743	7.27		3.454							
5/31/2007	8:00	8.108	5.667	2.479	7.052	8.463	8.245	6.743	7.261		3.448							
5/31/2007	12:00	8.098	5.672	2.481	7.05	8.45	8.239	6.747	7.255		3.44							
5/31/2007	16:00	8.088	5.676	2.479	7.05	8.444	8.236	6.747	7.259		3.436							
5/31/2007	20:00	8.106	5.676	2.485	7.048	8.442	8.236	6.745	7.257		3.442							
6/1/2007	0:00	8.096	5.678	2.493	7.046	8.446	8.229	6.747	7.253		3.442							
6/1/2007	4:00	8.07	5.659	2.479	7.021	8.412	8.209	6.724	7.231		3.432							
6/1/2007	8:00	8.053	5.657	2.477	7.017	8.405	8.169	6.714	7.216		3.422							
6/1/2007	12:00	8.041	5.663	2.475	7.015	8.391	8.192	6.712	7.21		3.418							
6/1/2007	16:00	8.051	5.665	2.473	7.015	8.389	8.197	6.716	7.216		3.42							
6/1/2007	20:00	8.049	5.663	2.471	7.009	8.385	8.188	6.714	7.212		3.414							
6/2/2007	0:00	8.043	5.663	2.471	7.005	8.383	8.182	6.712	7.208		3.41							
6/2/2007	4:00	8.033	5.663	2.473	7.001	8.378	8.178	6.716	7.201		3.406							
6/2/2007	8:00	8.023	5.663	2.473	6.997	8.373	8.171	6.717	7.195		3.402							
6/2/2007	12:00	8.012	5.671	2.477	6.997	8.364	8.165	6.729	7.188		3.397							
6/2/2007	16:00	8.012	5.674	2.481	6.997	8.364	8.171	6.738	7.199		3.397							
6/2/2007	20:00	8.025	5.676	2.487	6.995	8.369	8.172	6.738	7.197		3.404							
6/3/2007	0:00	8.019	5.68	2.497	6.999	8.373	8.169	6.747	7.193		3.406							
6/3/2007	4:00	8.01	5.686	2.507	6.997	8.373	8.167	6.755	7.188		3.406							
6/3/2007	8:00	8.006	5.694	2.518	6.999	8.377	8.167	6.765	7.186		3.408							
6/3/2007	12:00	7.998	5.705	2.532	7.001	8.375	8.165	6.781	7.186		3.406							
6/3/2007	16:00	8	5.717	2.544	7.005	8.375	8.174	6.791	7.197		3.41							
6/3/2007	20:00	8.01	5.721	2.555	7.007	8.378	8.171	6.793	7.197		3.42							
6/4/2007	0:00	8.01	5.73	2.567	7.009	8.39	8.176	6.805	7.193		3.422							
6/4/2007	4:00	8.006	5.742	2.585	7.015	8.394	8.178	6.817	7.195		3.43							
6/4/2007	8:00	8.006	5.756	2.6	7.017	8.402	8.184	6.834	7.195		3.436							
6/4/2007	12:00	8.002	5.773	2.618	7.034	8.402	8.184	6.856	7.195		3.44							
6/4/2007	16:00	8.006	5.79	2.638	7.04	8.409	8.197	6.874	7.218		3.45							
6/4/2007	20:00	8.033	5.806	2.657	7.05	8.425	8.209	6.884	7.225		3.469							
6/5/2007	0:00	8.035	5.817	2.673	7.056	8.439	8.15	6.898	7.225		3.475							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
6/5/2007	4:00	8.035	5.837	2.696	7.065	8.451	8.161	6.918	7.231		3.485							
6/5/2007	8:00	8.039	5.856	2.716	7.077	8.462	8.233	6.937	7.238		3.496							
6/5/2007	12:00	8.043	5.877	2.737	7.089	8.466	8.241	6.961	7.244		3.503							
6/5/2007	16:00	8.049	5.899	2.759	7.104	8.47	8.253	6.98	7.261		3.515							
6/5/2007	20:00	8.076	5.912	2.778	7.114	8.483	8.262	6.992	7.272		3.536							
6/6/2007	0:00	8.078	5.926	2.794	7.124	8.495	8.273	7.004	7.276		3.546							
6/6/2007	4:00	8.076	5.937	2.804	7.13	8.497	8.278	7.011	7.281		3.552							
6/6/2007	8:00	8.072	5.947	2.813	7.137	8.499	8.283	7.011	7.285		3.56							
6/6/2007	12:00	8.068	5.955	2.815	7.143	8.492	8.285	7.019	7.285		3.564							
6/6/2007	16:00	8.078	5.966	2.823	7.161	8.492	8.298	7.026	7.291		3.576							
6/6/2007	20:00	8.094	5.97	2.827	7.165	8.497	8.308	7.021	7.315		3.591							
6/7/2007	0:00	8.094	5.978	2.833	7.172	8.505	8.31	7.023	7.317		3.599							
6/7/2007	4:00	8.088	5.982	2.833	7.174	8.502	8.319	7.026	7.319		3.605							
6/7/2007	8:00	8.092	5.991	2.837	7.178	8.508	8.321	7.031	7.323		3.615							
6/7/2007	12:00	8.092	6.005	2.845	7.194	8.51	8.331	7.042	7.33		3.619							
6/7/2007	16:00	8.1	6.028	2.864	7.215	8.526	8.346	7.064	7.358		3.635							
6/7/2007	20:00	8.141	6.051	2.888	7.243	8.547	8.367	7.088	7.366		3.658							
6/8/2007	0:00	8.162	6.082	2.921	7.26	8.585	8.396	7.121	7.384		3.68							
6/8/2007	4:00	8.178	6.119	2.96	7.278	8.617	8.413	7.16	7.401		3.699							
6/8/2007	8:00	8.192	6.16	3.003	7.303	8.651	8.434	7.203	7.422		3.717							
6/8/2007	12:00	8.207	6.202	3.04	7.324	8.673	8.453	7.248	7.435		3.731							
6/8/2007	16:00	8.225	6.241	3.081	7.35	8.698	8.482	7.289	7.465		3.747							
6/8/2007	20:00	8.264	6.276	3.12	7.375	8.728	8.509	7.315	7.491		3.775							
6/9/2007	0:00	8.28	6.305	3.15	7.4	8.754	8.535	7.342	7.508		3.798							
6/9/2007	4:00	8.294	6.334	3.181	7.42	8.776	8.554	7.366	7.527		3.819							
6/9/2007	8:00	8.311	6.363	3.21	7.443	8.795	8.577	7.392	7.544		3.839							
6/9/2007	12:00	8.315	6.388	3.23	7.459	8.802	8.592	7.421	7.559		3.851							
6/9/2007	16:00	8.327	6.409	3.251	7.478	8.813	8.613	7.435	7.589		3.865							
6/9/2007	20:00	8.364	6.428	3.269	7.498	8.837	8.64	7.447	7.607		3.896							
6/10/2007	0:00	8.378	6.446	3.285	7.519	8.856	8.659	7.462	7.624		3.918							
6/10/2007	4:00	8.385	6.461	3.298	7.533	8.866	8.669	7.469	7.637		3.93							
6/10/2007	8:00	8.397	6.475	3.308	7.544	8.879	8.688	7.481	7.652		3.946							
6/10/2007	12:00	8.407	6.488	3.322	7.56	8.893	8.703	7.497	7.665		3.958							
6/10/2007	16:00	8.417	6.5	3.331	7.574	8.901	8.711	7.509	7.677		3.97							
6/10/2007	20:00	8.433	6.515	3.345	7.587	8.914	8.73	7.521	7.692		3.987							
6/11/2007	0:00	8.45	6.527	3.359	7.601	8.933	8.747	7.533	7.71		4.006							
6/11/2007	4:00	8.458	6.535	3.374	7.611	8.946	8.762	7.545	7.722		4.017							
6/11/2007	8:00	8.47	6.552	3.392	7.63	8.964	8.779	7.565	7.737		4.033							
6/11/2007	12:00	8.499	6.633	3.439	7.655	8.981	8.791	7.581	7.746		4.048							
6/11/2007	16:00	8.495	6.681	3.48	7.679	8.985	8.799	7.598	7.761		4.06							
6/11/2007	20:00	8.521	6.678	3.496	7.702	9	8.818	7.61	7.778		4.075							
6/12/2007	0:00	8.538	6.676	3.511	7.72	9.028	8.837	7.632	7.795		4.097							
6/12/2007	4:00	8.546	6.676	3.521	7.733	9.039	8.85	7.644	7.808		4.113							
6/12/2007	8:00	8.554	6.716	3.537	7.745	9.055	8.865	7.66	7.821		4.131							
6/12/2007	12:00	8.576	6.823	3.586	7.772	9.069	8.879	7.677	7.836		4.153							
6/12/2007	16:00	8.587	6.809	3.605	7.794	9.076	8.89	7.691	7.849		4.166							
6/12/2007	20:00	8.605	6.792	3.615	7.807	9.089	8.907	7.701	7.868		4.182							
6/13/2007	0:00	8.619	6.784	3.621	7.819	9.108	8.923	7.715	7.881		4.201							
6/13/2007	4:00	8.627	6.778	3.627	7.827	9.119	8.932	7.725	7.892		4.213							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
6/13/2007	8:00	8.636	6.778	3.632	7.838	9.131	8.947	7.737	7.901		4.225							
6/13/2007	12:00	8.648	6.782	3.642	7.856	9.141	8.961	7.754	7.918		4.239							
6/13/2007	16:00	8.654	6.786	3.65	7.868	9.146	8.97	7.766	7.931		4.247							
6/13/2007	20:00	8.683	6.788	3.656	7.879	9.161	8.98	7.773	7.946		4.264							
6/14/2007	0:00	8.697	6.794	3.666	7.887	9.179	8.997	7.787	7.961		4.28							
6/14/2007	4:00	8.706	6.799	3.672	7.895	9.19	9.007	7.797	7.969		4.29							
6/14/2007	8:00	8.715	6.805	3.681	7.903	9.201	9.02	7.809	7.978		4.3							
6/14/2007	12:00	8.719	6.821	3.691	7.918	9.207	9.028	7.826	7.988		4.312							
6/14/2007	16:00	8.726	6.828	3.701	7.932	9.218	9.045	7.838	8.012		4.325							
6/14/2007	20:00	8.758	6.84	3.711	7.946	9.238	9.064	7.85	8.025		4.343							
6/15/2007	0:00	8.773	6.852	3.724	7.961	9.259	9.079	7.861	8.036		4.357							
6/15/2007	4:00	8.779	6.863	3.736	7.97	9.27	9.091	7.876	8.046		4.367							
6/15/2007	8:00	8.785	6.877	3.748	7.98	9.284	9.102	7.89	8.057		4.377							
6/15/2007	12:00	8.775	6.898	3.76	7.996	9.289	9.11	7.914	8.064		4.386							
6/15/2007	16:00	8.797	6.913	3.775	8.014	9.307	9.135	7.931	8.091		4.398							
6/15/2007	20:00	8.844	6.929	3.789	8.029	9.328	9.154	7.945	8.109		4.418							
6/16/2007	0:00	8.856	6.946	3.806	8.043	9.35	9.171	7.962	8.119		4.434							
6/16/2007	4:00	8.86	6.964	3.822	8.057	9.366	9.184	7.979	8.13		4.446							
6/16/2007	8:00	8.869	6.981	3.838	8.07	9.379	9.194	7.996	8.141		4.457							
6/16/2007	12:00	8.869	7.004	3.855	8.086	9.38	9.198	8.017	8.147		4.465							
6/16/2007	16:00	8.879	7.024	3.873	8.099	9.395	9.217	8.039	8.179		4.479							
6/16/2007	20:00	8.92	7.041	3.889	8.118	9.417	9.24	8.051	8.186		4.501							
6/17/2007	0:00	8.934	7.058	3.908	8.131	9.441	9.261	8.063	8.201		4.518							
6/17/2007	4:00	8.938	7.076	3.924	8.14	9.453	9.274	8.077	8.214		4.53							
6/17/2007	8:00	8.942	7.087	3.935	8.148	9.461	9.285	8.087	8.222		4.54							
6/17/2007	12:00	8.944	7.103	3.943	8.161	9.462	9.293	8.103	8.231		4.546							
6/17/2007	16:00	8.954	7.12	3.955	8.173	9.473	9.312	8.115	8.252		4.56							
6/17/2007	20:00	8.979	7.128	3.961	8.189	9.486	9.327	8.118	8.265		4.574							
6/18/2007	0:00	8.991	7.14	3.969	8.197	9.502	9.341	8.127	8.276		4.589							
6/18/2007	4:00	8.995	7.149	3.975	8.204	9.511	9.352	8.134	8.284		4.599							
6/18/2007	8:00	9.001	7.159	3.982	8.216	9.523	9.36	8.144	8.293		4.607							
6/18/2007	12:00	9.005	7.17	3.99	8.224	9.531	9.373	8.156	8.304		4.613							
6/18/2007	16:00	9.024	7.18	3.998	8.237	9.539	9.385	8.168	8.319		4.625							
6/18/2007	20:00	9.038	7.188	4.008	8.242	9.557	9.396	8.178	8.332		4.637							
6/19/2007	0:00	9.05	7.199	4.023	8.257	9.576	9.411	8.197	8.345		4.65							
6/19/2007	4:00	9.063	7.213	4.043	8.269	9.597	9.427	8.216	8.357		4.664							
6/19/2007	8:00	9.075	7.228	4.061	8.284	9.619	9.442	8.24	8.368		4.676							
6/19/2007	12:00	9.085	7.252	4.084	8.3	9.624	9.45	8.266	8.381		4.682							
6/19/2007	16:00	9.097	7.275	4.111	8.321	9.65	9.476	8.293	8.409		4.7							
6/19/2007	20:00	9.142	7.294	4.135	8.34	9.677	9.499	8.312	8.424		4.727							
6/20/2007	0:00	9.155	7.314	4.158	8.356	9.698	9.515	8.328	8.437		4.741							
6/20/2007	4:00	9.165	7.331	4.176	8.372	9.713	9.532	8.345	8.452		4.755							
6/20/2007	8:00	9.171	7.35	4.192	8.387	9.728	9.545	8.364	8.46		4.768							
6/20/2007	12:00	9.183	7.37	4.211	8.401	9.735	9.551	8.384	8.471		4.778							
6/20/2007	16:00	9.188	7.389	4.229	8.417	9.744	9.568	8.4	8.497		4.79							
6/20/2007	20:00	9.232	7.406	4.246	8.438	9.767	9.593	8.415	8.512		4.816							
6/21/2007	0:00	9.242	7.421	4.26	8.455	9.788	9.612	8.427	8.525		4.835							
6/21/2007	4:00	9.249	7.439	4.276	8.465	9.802	9.627	8.439	8.538		4.847							
6/21/2007	8:00	9.253	7.451	4.289	8.477	9.813	9.635	8.451	8.546		4.855							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
6/21/2007	12:00	9.257	7.466	4.303	8.49	9.817	9.644	8.467	8.557		4.861							
6/21/2007	16:00	9.271	7.484	4.315	8.506	9.831	9.665	8.484	8.578		4.877							
6/21/2007	20:00	9.308	7.497	4.326	8.527	9.852	9.683	8.496	8.591		4.9							
6/22/2007	0:00	9.32	7.511	4.34	8.541	9.87	9.702	8.503	8.604		4.916							
6/22/2007	4:00	9.326	7.524	4.354	8.553	9.882	9.715	8.518	8.617		4.93							
6/22/2007	8:00	9.33	7.536	4.364	8.564	9.892	9.723	8.527	8.626		4.94							
6/22/2007	12:00	9.33	7.549	4.375	8.576	9.892	9.727	8.542	8.632		4.94							
6/22/2007	16:00	9.338	7.562	4.385	8.588	9.9	9.74	8.554	8.647		4.95							
6/22/2007	20:00	9.373	7.574	4.393	8.605	9.916	9.763	8.561	8.664		4.973							
6/23/2007	0:00	9.379	7.574	4.393	8.598	9.926	9.744	8.563	8.668		4.973							
6/23/2007	4:00	9.363	7.566	4.383	8.592	9.913	9.637	8.551	8.656		4.983							
6/23/2007	8:00	9.37	7.578	4.395	8.601	9.929	9.646	8.563	8.664		4.987							
6/23/2007	12:00	9.368	7.589	4.403	8.598	9.932	9.738	8.582	8.671		4.981							
6/23/2007	16:00	9.379	7.601	4.414	8.605	9.942	9.784	8.592	8.683		4.987							
6/23/2007	20:00	9.398	7.611	4.428	8.613	9.958	9.803	8.604	8.694		4.999							
6/24/2007	0:00	9.408	7.62	4.438	8.621	9.975	9.818	8.616	8.707		5.013							
6/24/2007	4:00	9.408	7.628	4.45	8.627	9.985	9.824	8.625	8.711		5.019							
6/24/2007	8:00	9.414	7.64	4.463	8.635	9.998	9.839	8.64	8.722		5.03							
6/24/2007	12:00	9.41	7.649	4.473	8.644	9.998	9.837	8.657	8.724		5.028							
6/24/2007	16:00	9.42	7.665	4.485	8.654	10.008	9.851	8.671	8.743		5.038							
6/24/2007	20:00	9.453	7.681	4.502	8.672	10.028	9.872	8.685	8.754		5.06							
6/25/2007	0:00	9.462	7.694	4.518	8.685	10.049	9.887	8.7	8.763		5.07							
6/25/2007	4:00	9.465	7.707	4.536	8.695	10.063	9.9	8.716	8.771		5.08							
6/25/2007	8:00	9.471	7.723	4.551	8.705	10.073	9.908	8.731	8.782		5.093							
6/25/2007	12:00	9.475	7.742	4.565	8.718	10.072	9.914	8.752	8.791		5.099							
6/25/2007	16:00	9.492	7.758	4.581	8.732	10.088	9.931	8.767	8.808		5.111							
6/25/2007	20:00	9.519	7.775	4.598	8.751	10.107	9.952	8.783	8.823		5.131							
6/26/2007	0:00	9.531	7.794	4.618	8.767	10.131	9.969	8.8	8.836		5.147							
6/26/2007	4:00	9.539	7.812	4.639	8.779	10.147	9.984	8.817	8.849		5.145							
6/26/2007	8:00	9.524	7.831	4.657	8.794	10.162	9.988	8.836	8.859		5.168							
6/26/2007	12:00	9.555	7.848	4.672	8.808	10.155	9.975	8.853	8.864		5.182							
6/26/2007	16:00	9.562	7.868	4.688	8.827	10.169	9.984	8.872	8.874		5.192							
6/26/2007	20:00	9.6	7.885	4.706	8.845	10.186	10.005	8.884	8.887		5.217							
6/27/2007	0:00	9.61	7.902	4.727	8.862	10.209	10.032	8.901	8.902		5.233							
6/27/2007	4:00	9.619	7.916	4.741	8.874	10.222	10.047	8.913	8.915		5.243							
6/27/2007	8:00	9.622	7.931	4.758	8.884	10.238	10.066	8.932	8.928		5.255							
6/27/2007	12:00	9.631	7.943	4.77	8.896	10.24	10.066	8.951	8.932		5.263							
6/27/2007	16:00	9.654	7.949	4.778	8.903	10.25	10.08	8.961			5.269							
6/27/2007	20:00	9.645	7.943	4.774	8.903	10.253	10.059	8.961			5.269							
6/28/2007	0:00	9.657	7.953	4.786	8.913	10.27	10.021	8.973			5.284							
6/28/2007	4:00	9.665	7.96	4.798	8.917	10.283	10.051	8.985			5.292							
6/28/2007	8:00	9.674	7.972	4.813	8.927	10.298	10.076	8.997			5.302							
6/28/2007	12:00	9.676	7.982	4.825	8.942	10.323	10.141	9.016			5.314							
6/28/2007	16:00	9.688	7.984	4.833	8.948	10.325	10.149	9.028			5.318							
6/28/2007	20:00	9.712	7.995	4.846	8.958	10.338	10.168	9.04			5.328							
6/29/2007	0:00	9.723	8.005	4.858	8.964	10.355	10.183	9.052			5.345							
6/29/2007	4:00	9.727	8.013	4.868	8.975	10.362	10.191	9.059			5.353							
6/29/2007	8:00	9.733	8.032	4.878	8.981	10.373	10.202	9.073			5.363							
6/29/2007	12:00	9.743	8.121	4.93	8.997	10.397	10.219	9.088			5.373							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well															
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
6/29/2007	16:00	9.735	8.156	4.962	9.005	10.392	10.219	9.097			5.377							
6/29/2007	20:00	9.758	8.134	4.968	9.022	10.402	10.231	9.104			5.389							
6/30/2007	0:00	9.772	8.127	4.972	9.036	10.416	10.244	9.116			5.403							
6/30/2007	4:00	9.778	8.119	4.972	9.04	10.419	10.252	9.121			5.412							
6/30/2007	8:00	9.786	8.115	4.977	9.051	10.424	10.261	9.126			5.422							
6/30/2007	12:00	9.795	8.119	4.985	9.063	10.432	10.271	9.14			5.43							
6/30/2007	16:00	9.805	8.123	4.989	9.071	10.429	10.275	9.147			5.434							
6/30/2007	20:00	9.811	8.125	4.993	9.081	10.441	10.288	9.15			5.448							
7/1/2007	0:00	9.829	8.131	5.003	9.094	10.458	10.303	9.159			5.464							
7/1/2007	4:00	9.833	8.136	5.011	9.104	10.465	10.307	9.169			5.473							
7/1/2007	8:00	9.844	8.144	5.018	9.108	10.473	10.32	9.176			5.481							
7/1/2007	12:00	9.852	8.156	5.032	9.121	10.479	10.326	9.193			5.487							
7/1/2007	16:00	9.864	8.17	5.042	9.137	10.484	10.336	9.205			5.495							
7/1/2007	20:00	9.882	8.177	5.054	9.143	10.497	10.349	9.214			5.511							
7/2/2007	0:00	9.895	8.189	5.069	9.16	10.516	10.366	9.229			5.527							
7/2/2007	4:00	9.903	8.2	5.081	9.17	10.527	10.376	9.238			5.538							
7/2/2007	8:00	9.904	8.266	5.099	9.176	10.538	10.387	9.253			5.548							
7/2/2007	12:00	9.923	8.332	5.142	9.19	10.548	10.399	9.267			5.552							
7/2/2007	16:00	9.933	8.382	5.173	9.207	10.577	10.42	9.282			5.564							
7/2/2007	20:00	9.95	8.349	5.179	9.221	10.572	10.424	9.289			5.578							
7/3/2007	0:00	9.962	8.337	5.183	9.238	10.586	10.437	9.303			5.596							
7/3/2007	4:00	9.966	8.328	5.19	9.246	10.594	10.445	9.315			5.607							
7/3/2007	8:00	9.97	8.332	5.196	9.254	10.609	10.456	9.323			5.615							
7/3/2007	12:00	9.976	8.333	5.202	9.262	10.618	10.464	9.339			5.621							
7/3/2007	16:00	9.978	8.339	5.21	9.283	10.614	10.464	9.356			5.629							
7/3/2007	20:00	10.011	8.341	5.216	9.295	10.638	10.487	9.366			5.647							
7/4/2007	0:00	10.021	8.347	5.222	9.308	10.652	10.504	9.375			5.659							
7/4/2007	4:00	10.025	8.353	5.23	9.312	10.662	10.513	9.385			5.67							
7/4/2007	8:00	10.029	8.359	5.237	9.318	10.678	10.523	9.397			5.676							
7/4/2007	12:00	10.027	8.374	5.245	9.328	10.659	10.515	9.414			5.678							
7/4/2007	16:00	10.052	8.384	5.257	9.345	10.676	10.532	9.433			5.698							
7/4/2007	20:00	10.066	8.393	5.267	9.355	10.697	10.548	9.445			5.71							
7/5/2007	0:00	10.079	8.405	5.282	9.369	10.718	10.563	9.457			5.724							
7/5/2007	4:00	10.087	8.418	5.294	9.379	10.732	10.576	9.471			5.735							
7/5/2007	8:00	10.085	8.44	5.308	9.39	10.745	10.588	9.486			5.743							
7/5/2007	12:00	10.087	8.604	5.347	9.406	10.74	10.59	9.509			5.745							
7/5/2007	16:00	10.099	8.618	5.39	9.419	10.767	10.616	9.531			5.759							
7/5/2007	20:00	10.144	8.587	5.402	9.445	10.783	10.632	9.545			5.783							
7/6/2007	0:00	10.16	8.575	5.413	9.458	10.808	10.651	9.557			5.8							
7/6/2007	4:00	10.164	8.575	5.423	9.472	10.822	10.664	9.574			5.812							
7/6/2007	8:00	10.168	8.579	5.431	9.485	10.845	10.683	9.59			5.822							
7/6/2007	12:00	10.175	8.587	5.435	9.495	10.843	10.689	9.61			5.83							
7/6/2007	16:00	10.179	8.596	5.447	9.511	10.888	10.729	9.629			5.842							
7/6/2007	20:00	10.222	8.606	5.458	9.54	10.902	10.748	9.644			5.865							
7/7/2007	0:00	10.234	8.614	5.464	9.548	10.913	10.76	9.656			5.877							
7/7/2007	4:00	10.238	8.623	5.474	9.548	10.922	10.771	9.665			5.887							
7/7/2007	8:00	10.246	8.631	5.482	9.559	10.931	10.777	9.679			5.897							
7/7/2007	12:00	10.241	8.641	5.484	9.567	10.926	10.779	9.694			5.899							
7/7/2007	16:00	10.25	8.652	5.492	9.579	10.934	10.796	9.708			5.909							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
7/7/2007	20:00	10.289	8.662	5.501	9.6	10.955	10.817	9.718			5.93							
7/8/2007	0:00	10.301	8.672	5.509	9.61	10.974	10.832	9.729			5.942							
7/8/2007	4:00	10.305	8.683	5.517	9.62	10.984	10.842	9.739			5.95							
7/8/2007	8:00	10.313	8.691	5.525	9.627	10.997	10.853	9.754			5.958							
7/8/2007	12:00	10.309	8.703	5.529	9.641	10.994	10.853	9.768			5.958							
7/8/2007	16:00	10.311	8.716	5.538	9.649	11.003	10.87	9.784			5.966							
7/8/2007	20:00	10.352	8.728	5.548	9.664	11.027	10.891	9.797			5.989							
7/9/2007	0:00	10.369	8.739	5.56	9.676	11.048	10.907	9.811			6.001							
7/9/2007	4:00	10.373	8.751	5.57	9.686	11.061	10.92	9.823			6.009							
7/9/2007	8:00	10.373	8.764	5.583	9.696	11.078	10.935	9.84			6.019							
7/9/2007	12:00	10.344	8.78	5.591	9.711	11.085	10.939	9.861			6.023							
7/9/2007	16:00	10.575	8.791	5.603	9.725	11.102	10.951	9.878										
7/9/2007	20:00	10.532	8.805	5.621	10.091	11.128	10.972	9.895										
7/10/2007	0:00	10.522	8.82	5.64	9.898	11.149	10.991	9.909			6.266							
7/10/2007	4:00	10.524	8.832	5.656	9.857	11.165	11.006	9.926			6.214							
7/10/2007	8:00	10.455	8.846	5.675	9.844	11.183	11.023	9.945			6.191							
7/10/2007	12:00	10.512	8.859	5.687	9.842	11.217	11.048	9.967			6.179							
7/10/2007	16:00	10.576	8.875	5.703	9.85	11.226	11.069	9.988			6.175							
7/10/2007	20:00	10.582	8.894	5.724	9.869	11.249	11.09	10.01			6.187							
7/11/2007	0:00	10.593	8.909	5.744	9.879	11.274	11.109	10.034			6.179							
7/11/2007	4:00	10.602	8.925	5.763	9.885	11.29	11.124	10.055			6.181							
7/11/2007	8:00	10.64	8.946	5.781	9.893	11.313	11.142	10.079			6.189							
7/11/2007	12:00	10.602	8.978	5.859	9.914	11.34	11.17	10.105			6.176							
7/11/2007	16:00	10.765	8.989	5.875	10.086	11.359	11.494	9.821	9.695		6.209							
7/11/2007	20:00	10.768	9.001	5.889	10.096	11.358	11.509	9.835	9.712		6.22							
7/12/2007	0:00	10.778	9.017	5.906	10.114	11.375	11.521	9.852	9.727		6.238							
7/12/2007	4:00	10.78	9.026	5.916	10.123	11.38	11.528	9.862	9.738		6.244							
7/12/2007	8:00	10.782	9.04	5.924	10.133	11.396	11.545	9.878	9.744		6.254							
7/12/2007	12:00	10.79	9.055	5.936	10.147	11.401	11.555	9.898	9.757		6.258							
7/12/2007	16:00	10.798	9.065	5.94	10.156	11.401	11.563	9.907	9.776		6.266							
7/12/2007	20:00	10.837	9.074	5.951	10.17	11.428	11.587	9.916	9.79		6.285							
7/13/2007	0:00	10.845	9.088	5.965	10.184	11.449	11.601	9.933	9.8		6.299							
7/13/2007	4:00	10.849	9.098	5.977	10.193	11.46	11.612	9.95	9.811		6.307							
7/13/2007	8:00	10.856	9.111	5.992	10.207	11.489	11.635	9.967	9.817		6.317							
7/13/2007	12:00	10.862	9.131		10.223	11.497	11.645	9.988	9.832		6.323							
7/13/2007	16:00	10.853	9.312	6.112	10.236	11.531	11.675	10.592	9.858		6.333							
7/13/2007	20:00	10.898	9.224	6.079	10.25	11.555	11.795	10.075	9.869		6.352							
7/14/2007	0:00	10.921	9.211	6.075	10.264	11.567	11.752	10.068	9.892		6.366							
7/14/2007	4:00	10.927	9.207	6.075	10.275	11.571	11.743	10.07	9.903		6.374							
7/14/2007	8:00	10.939	9.207	6.075	10.283	11.575	11.738	10.075			6.38							
7/14/2007	12:00	10.937	9.215	6.077	10.293	11.574	11.742	10.09			6.386							
7/14/2007	16:00	10.949	9.222	6.079	10.303	11.687	11.759	10.099			6.397							
7/14/2007	20:00	11.023	9.22	6.079	10.312	11.646	11.78	10.104	10.173		6.402							
7/15/2007	0:00	11.023	9.23	6.091	10.33	11.651	11.794	10.123	10.1		6.429							
7/15/2007	4:00	11.029	9.24	6.099	10.338	11.654	11.805	10.133	10.074		6.441							
7/15/2007	8:00	11.035	9.247	6.105	10.349	11.663	11.809	10.149	10.064		6.449							
7/15/2007	12:00	11.031	9.263	6.118	10.365	11.665	11.817	10.171	10.053		6.455							
7/15/2007	16:00	11.031	9.274	6.128	10.377	11.673	11.832	10.188	10.068		6.461							
7/15/2007	20:00	11.072	9.284	6.138	10.392	11.691	11.851	10.2	10.068		6.484							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
7/16/2007	0:00	11.086	9.296	6.153	10.41	11.712	11.868	10.217	10.077		6.498							
7/16/2007	4:00	11.09	9.309	6.165	10.421	11.724	11.878	10.228	10.083		6.506							
7/16/2007	8:00	11.09	9.319	6.173	10.431	11.737	11.887	10.245	10.087		6.512							
7/16/2007	12:00	11.095	9.336	6.183	10.441	11.76	11.916	10.267	10.094		6.518							
7/16/2007	16:00	11.099	9.356	6.198	10.456	11.8	11.952	10.288	10.124		6.53							
7/16/2007	20:00	11.144	9.369	6.214	10.476	11.827	11.981	10.305	10.134		6.551							
7/17/2007	0:00	11.16	9.383	6.226	10.493	11.832	11.992	10.319	10.145		6.563							
7/17/2007	4:00	11.164	9.396	6.238	10.501	11.838	11.998	10.339	10.156		6.571							
7/17/2007	8:00	11.166	9.408	6.251	10.511	11.854	12.004	10.351	10.16		6.579							
7/17/2007	12:00	11.158	9.425	6.261	10.523	11.875	12.029	10.375	10.169		6.583							
7/17/2007	16:00	11.172	9.441	6.271	10.542	11.914	12.069	10.394	10.204		6.595							
7/17/2007	20:00	11.221	9.454	6.284	10.562	11.922	12.084	10.41	10.219		6.612							
7/18/2007	0:00	11.24	9.47	6.298	10.579	11.935	12.095	10.425	10.232		6.628							
7/18/2007	4:00	11.248	9.483	6.312	10.591	11.941	12.103	10.442	10.244		6.638							
7/18/2007	8:00	11.248	9.495	6.322	10.604	11.951	12.109	10.456	10.244		6.648							
7/18/2007	12:00	11.256	9.51	6.333	10.616	11.976	12.126	10.475	10.244		6.65							
7/18/2007	16:00	11.264	9.524	6.347	10.632	11.975	12.147	10.492	10.271		6.663							
7/18/2007	20:00	11.309	9.539	6.361	10.655	12.01	12.17	10.506	10.312		6.685							
7/19/2007	0:00	11.323	9.551	6.369	10.673	12.02	12.183	10.518	10.321		6.695							
7/19/2007	4:00	11.334	9.566	6.384	10.692	12.029	12.195	10.537	10.334		6.711							
7/19/2007	8:00	11.34	9.578	6.394	10.696	12.045	12.2	10.559	10.334		6.721							
7/19/2007	12:00	11.356	9.589	6.408	10.704	12.084	12.235	10.576	10.353		6.725							
7/19/2007	16:00	11.352	9.609	6.423	10.714	12.08	12.233	10.6	10.362		6.734							
7/19/2007	20:00	11.393	9.624	6.435	10.737	12.098	12.251	10.616	10.381		6.754							
7/20/2007	0:00	11.407	9.636	6.451	10.747	12.119	12.271	10.638	10.396		6.77							
7/20/2007	4:00	11.417	9.649	6.468	10.758	12.133	12.283	10.655	10.409		6.784							
7/20/2007	8:00	11.425	9.663	6.48	10.772	12.146	12.296	10.674	10.419		6.793							
7/20/2007	12:00	11.434	9.674	6.494	10.795	12.151	12.294	10.691	10.426		6.801							
7/20/2007	16:00	11.45	9.692	6.505	10.807	12.16	12.308	10.707	10.43		6.815							
7/20/2007	20:00	11.477	9.702	6.519	10.828	12.18	12.33	10.722	10.454		6.833							
7/21/2007	0:00	11.493	9.715	6.533	10.842	12.199	12.349	10.739	10.467		6.847							
7/21/2007	4:00	11.504	9.729	6.548	10.854	12.215	12.363	10.755	10.482		6.862							
7/21/2007	8:00	11.515	9.74	6.56	10.865	12.233	12.376	10.772	10.494		6.874							
7/21/2007	12:00	11.519	9.752	6.57	10.879	12.239	12.386	10.791	10.501		6.878							
7/21/2007	16:00	11.521	9.767	6.584	10.891	12.247	12.397	10.81	10.516		6.888							
7/21/2007	20:00	11.557	9.779	6.595	10.908	12.268	12.418	10.825	10.529		6.906							
7/22/2007	0:00	11.571	9.788	6.609	10.926	12.289	12.436	10.839	10.544		6.923							
7/22/2007	4:00	11.579	9.802	6.621	10.936	12.305	12.449	10.854	10.557		6.933							
7/22/2007	8:00	11.593	9.812	6.632	10.947	12.319	12.462	10.871	10.567		6.943							
7/22/2007	12:00	11.591	9.825	6.638	10.959	12.321	12.468	10.887	10.572		6.945							
7/22/2007	16:00	11.61	9.839	6.648	10.969	12.334	12.485	10.899	10.589		6.957							
7/22/2007	20:00	11.634	9.846	6.658	10.988	12.355	12.506	10.914	10.604		6.975							
7/23/2007	0:00	11.642	9.858	6.67	10.998	12.372	12.521	10.926	10.617		6.988							
7/23/2007	4:00	11.653	9.868	6.679	11.008	12.387	12.533	10.938	10.63		6.996							
7/23/2007	8:00	11.659	9.877	6.689	11.021	12.398	12.546	10.952	10.64		7.006							
7/23/2007	12:00	11.62	9.829	6.597	10.963	12.337	12.533	10.883	10.61		7.038							
7/23/2007	16:00	11.624	9.81	6.609	10.971	12.338	12.508	10.892	10.595		6.998							
7/23/2007	20:00	11.645	9.798	6.613	10.961	12.345	12.519	10.897	10.606		6.949							
7/24/2007	0:00	11.649	9.788	6.615	10.957	12.359	12.526	10.907	10.619		6.947							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
7/24/2007	4:00	11.642	9.783	6.615	10.953	12.367	12.531	10.916	10.623		6.947							
7/24/2007	8:00	11.638	9.781	6.617	10.953	12.377	12.537	10.926	10.623		6.949							
7/24/2007	12:00	11.632	9.779	6.619	10.963	12.37	12.54	10.935	10.621		6.949							
7/24/2007	16:00	11.626	9.785	6.619	10.964	12.37	12.542	10.945	10.63		6.949							
7/24/2007	20:00	11.661	9.788	6.623	10.988	12.383	12.548	10.952	10.636		6.963							
7/25/2007	0:00	11.669	9.792	6.632	10.99	12.398	12.561	10.962	10.64		6.971							
7/25/2007	4:00	11.665	9.796	6.64	10.988	12.406	12.565	10.971	10.64		6.975							
7/25/2007	8:00	11.665	9.804	6.646	10.992	12.415	12.575	10.986	10.642		6.981							
7/25/2007	12:00	11.651	9.812	6.652	11	12.414	12.575	11	10.645		6.986							
7/25/2007	16:00	11.661	9.819	6.658	11.009	12.414	12.582	11.007	10.642		6.984							
7/25/2007	20:00	11.696	9.831	6.666	11.004	12.428	12.596	11.014	10.655		6.998							
7/26/2007	0:00	11.704	9.839	6.679	11.017	12.443	12.609	11.024	10.664		7.008							
7/26/2007	4:00	11.7	9.846	6.687	11.021	12.449	12.615	11.031	10.668		7.012							
7/26/2007	8:00	11.696	9.856	6.695	11.021	12.46	12.624	11.043	10.67		7.018							
7/26/2007	12:00	11.691	9.87	6.701	11.033	12.449	12.619	11.06	10.672		7.012							
7/26/2007	16:00	11.694	9.873	6.707	11.073	12.454	12.627	11.072	10.681		7.018							
7/26/2007	20:00	11.734	9.889	6.715	11.105	12.472	12.64	11.079	10.7		7.038							
7/27/2007	0:00	11.747	9.897	6.732	11.107	12.491	12.659	11.093	10.713		7.053							
7/27/2007	4:00	11.749	9.906	6.742	11.111	12.502	12.668	11.103	10.718		7.059							
7/27/2007	8:00	11.743	9.931	6.748	11.118	12.512	12.676	11.113	10.722		7.067							
7/27/2007	12:00	11.749	9.916	6.75	11.128	12.517	12.695	11.134	10.724		7.063							
7/27/2007	16:00	11.757	9.951	6.769	11.13	12.523	12.703	11.146	10.739		7.065							
7/27/2007	20:00	11.783	9.96	6.775	11.157	12.529	12.708	11.153	10.748		7.085							
7/28/2007	0:00	11.794	9.976	6.795	11.171	12.547	12.715	11.168	10.754		7.103							
7/28/2007	4:00	11.798	9.989	6.812	11.171	12.56	12.729	11.177	10.76		7.114							
7/28/2007	8:00	11.798	9.999	6.824	11.177	12.572	12.739	11.192	10.769		7.124							
7/28/2007	12:00	11.8	10.015	6.844	11.239	12.545	12.701	11.213	10.756		7.132							
7/28/2007	16:00	11.8	10.036	6.861	11.262	12.536	12.697	11.223	10.743		7.134							
7/28/2007	20:00	11.834	10.053	6.879	11.27	12.564	12.726	11.23	10.754		7.166							
7/29/2007	0:00	11.849	10.067	6.896	11.27	12.593	12.752	11.244	10.773		7.185							
7/29/2007	4:00	11.853	10.076	6.906	11.266	12.611	12.768	11.259	10.788		7.195							
7/29/2007	8:00	11.847	10.067	6.894	11.247	12.614	12.77	11.251	10.788		7.199							
7/29/2007	12:00	11.843	10.063	6.871	11.233	12.604	12.768	11.247	10.784		7.229							
7/29/2007	16:00	11.824	10.049	6.857	11.214	12.741	12.774	11.239	10.78		7.264							
7/29/2007	20:00	11.837	10.034	6.893	11.212	12.62	12.783	11.266	10.831		7.181							
7/30/2007	0:00	11.847	10.024	6.896	11.167	12.627	12.794	11.273	10.84		7.166							
7/30/2007	4:00	11.847	10.011	6.889	11.186	12.632	12.8	11.278	10.842		7.154							
7/30/2007	8:00	11.845	10.001	6.887	11.179	12.638	12.808	11.285	10.846		7.146							
7/30/2007	12:00	11.832	9.997	6.891	11.175	12.641	12.815	11.302	10.846		7.144							
7/30/2007	16:00	11.855	9.991	6.889	11.177	12.646	12.827	11.307	10.853		7.144							
7/30/2007	20:00	11.871	9.989	6.885	11.183	12.662	12.842	11.314	10.87		7.15							
7/31/2007	0:00	11.871	9.991	6.887	11.188	12.674	12.848	11.321	10.879		7.158							
7/31/2007	4:00	11.867	9.993	6.889	11.19	12.678	12.854	11.33	10.879		7.16							
7/31/2007	8:00	11.865	9.999	6.891	11.186	12.678	12.854	11.335	10.874		7.162							
7/31/2007	12:00	11.863	10.011	6.902	11.192	12.688	12.869	11.352	10.883		7.158							
7/31/2007	16:00	11.841	10.015	6.904	11.192	12.693	12.875	11.359	10.891		7.162							
7/31/2007	20:00	11.879	10.016	6.906	11.2	12.707	12.892	11.362	10.902		7.17							
8/1/2007	0:00	11.886	10.02	6.912	11.208	12.718	12.899	11.371	10.911		7.179							
8/1/2007	4:00	11.888	10.024	6.916	11.21	12.72	12.9	11.378	10.911		7.185							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
8/1/2007	8:00	11.875	10.016	6.889	11.194	12.704	12.886	11.364	10.894		7.197							
8/1/2007	12:00	11.824	9.993	6.875	11.196	12.694	12.894	11.35	10.881		7.225							
8/1/2007	16:00	11.875	9.98	6.875	11.223	12.672	12.875	11.35	10.876		7.187							
8/1/2007	20:00	11.902	9.966	6.865	11.208	12.672	12.882	11.345	10.881		7.16							
8/2/2007	0:00	11.898	9.955	6.857	11.2	12.678	12.886	11.352	10.883		7.154							
8/2/2007	4:00	11.906	9.943	6.844	11.186	12.677	12.878	11.348	10.881		7.142							
8/2/2007	8:00	11.875	9.933	6.838	11.179	12.68	12.882	11.354	10.87		7.126							
8/2/2007	12:00	11.853	9.939	6.836	11.179	12.685	12.886	11.364	10.872		7.126							
8/2/2007	16:00	11.875	9.941	6.82	11.223	12.675	12.878	11.374	10.87		7.13							
8/2/2007	20:00	11.902	9.941	6.824	11.22	12.685	12.886	11.357	10.821		7.142							
8/3/2007	0:00	11.888	9.943	6.83	11.214	12.691	12.89	11.359	10.821		7.148							
8/3/2007	4:00	11.877	9.947	6.836	11.208	12.697	12.894	11.371	10.823		7.152							
8/3/2007	8:00	11.867	9.949	6.836	11.2	12.702	12.899	11.374	10.821		7.15							
8/3/2007	12:00	11.881	9.953	6.84	11.196	12.704	12.903	11.383	10.821		7.15							
8/3/2007	16:00	11.906	9.957	6.844	11.2	12.712	12.917	11.397	10.831		7.154							
8/3/2007	20:00	11.918	9.96	6.844	11.214	12.723	12.932	11.455	10.846		7.162							
8/4/2007	0:00	11.906	9.966	6.848	11.231	12.735	12.936	11.453	10.851		7.166							
8/4/2007	4:00	11.91	9.972	6.855	11.214	12.737	12.936	11.445	10.853		7.17							
8/4/2007	8:00	11.904	9.974	6.859	11.21	12.739	12.938	11.445	10.851		7.172							
8/4/2007	12:00	11.886	9.982	6.863	11.21	12.729	12.932	11.445	10.84		7.17							
8/4/2007	16:00	11.922	9.991	6.869	11.212	12.731	12.938	11.453	10.857		7.172							
8/4/2007	20:00	11.912	10.001	6.871	11.227	12.746	12.951	11.453	10.864		7.187							
8/5/2007	0:00	11.908	10.007	6.879	11.233	12.757	12.959	11.457	10.868		7.195							
8/5/2007	4:00	11.908	10.016	6.889	11.233	12.762	12.966	11.462	10.872		7.199							
8/5/2007	8:00	11.908	10.024	6.898	11.235	12.765	12.97	11.467	10.874		7.203							
8/5/2007	12:00	11.924	10.034	6.904	11.237	12.768	12.974	11.491	10.874		7.205							
8/5/2007	16:00	11.939	10.045	6.91	11.245	12.778	12.987	11.517	10.896		7.207							
8/5/2007	20:00	11.957	10.057	6.918	11.264	12.798	12.999	11.551	10.9		7.223							
8/6/2007	0:00	11.945	10.067	6.93	11.27	12.814	13.012	11.563	10.917		7.231							
8/6/2007	4:00	11.949	10.078	6.941	11.274	12.827	13.018	11.561	10.921		7.237							
8/6/2007	8:00	11.947	10.088	6.953	11.282	12.837	13.029	11.561	10.926		7.246							
8/6/2007	12:00	11.965	10.096	6.963	11.301	12.829	13.024	11.566	10.926		7.248							
8/6/2007	16:00	11.992	10.115	6.977	11.331	12.826	13.018	11.594	10.934		7.254							
8/6/2007	20:00	12.012	10.132	6.994	11.354	12.842	13.031	11.712	10.941		7.278							
8/7/2007	0:00	12.012	10.145	7.008	11.36	12.866	13.045	11.695	10.949		7.292							
8/7/2007	4:00	12.004	10.158	7.022	11.368	12.885	13.062	11.683	10.962		7.304							
8/7/2007	8:00	12.014	10.169	7.036	11.373	12.899	13.075	11.676	10.971		7.313							
8/7/2007	12:00	12.026	10.183	7.045	11.375	12.906	13.083	11.678	10.973		7.317							
8/7/2007	16:00	12.049	10.196	7.055	11.385	12.928	13.104	11.834	10.999		7.323							
8/7/2007	20:00	12.073	10.21	7.067	11.405	12.959	13.125	11.965	11.016		7.343							
8/8/2007	0:00	12.078	10.223	7.083	11.412	12.994	13.142	11.994	11.029		7.355							
8/8/2007	4:00	12.086	10.217	7.081	11.399	13.002	13.14	12.004	11.031		7.382							
8/8/2007	8:00	12.086	10.224	7.075	11.397	13.015	13.15	11.946	11.022		7.351							
8/8/2007	12:00	12.08	10.229	7.09	11.403	13.037	13.169	11.918	11.031		7.359							
8/8/2007	16:00	12.127	10.227	7.102	11.436	13.018	13.155	11.994	11.02		7.349							
8/8/2007	20:00	12.114	10.239	7.12	11.469	13.028	13.165	12.085	11.029		7.365							
8/9/2007	0:00	12.058	10.146	7.088	11.383	12.964	13.123	11.836	10.928		7.313							
8/9/2007	4:00	12.041	10.08	6.975	11.344	12.952	13.119	11.731	10.932		7.286							
8/9/2007	8:00	12.024	10.036	6.918	11.323	12.947	13.119	11.783	10.941		7.248							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
8/9/2007	12:00	12.025	10.001	6.885	11.301	12.933	13.111	11.755	10.939		7.248							
8/9/2007	16:00	12.025	9.974	6.864	11.301	12.909	13.094	11.757	10.939		7.221							
8/9/2007	20:00	12.031	9.949	6.852	11.307	12.912	13.094	11.834	10.93		7.211							
8/10/2007	0:00	12.011	9.931	6.846	11.294	12.919	13.094	11.805	10.924		7.203							
8/10/2007	4:00	12.021	9.918	6.842	11.28	12.923	13.096	11.774	10.915		7.193							
8/10/2007	8:00	12.023	9.902	6.836	11.262	12.912	13.085	11.745	10.902		7.179							
8/10/2007	12:00	11.988	9.893	6.834	11.247	12.903	13.087	11.728	10.902		7.168							
8/10/2007	16:00	11.984	9.885	6.83	11.235	12.891	13.087	11.712	10.902		7.158							
8/10/2007	20:00	12	9.879	6.819	11.241	12.893	13.09	11.697	10.902		7.162							
8/11/2007	0:00	11.988	9.875	6.821	11.237	12.89	13.085	11.685	10.898		7.162							
8/11/2007	4:00	11.97	9.872	6.819	11.223	12.882	13.079	11.673	10.889		7.158							
8/11/2007	8:00	11.947	9.868	6.821	11.214	12.876	13.073	11.661	10.879		7.156							
8/11/2007	12:00	12.007	9.873	6.83	11.21	12.864	13.069	11.664	10.879		7.158							
8/11/2007	16:00	11.955	9.875	6.832	11.21	12.856	13.064	11.657	10.887		7.156							
8/11/2007	20:00	11.966	9.879	6.838	11.223	12.864	13.071	11.657	10.887		7.164							
8/12/2007	0:00	11.949	9.887	6.848	11.223	12.872	13.073	11.659	10.889		7.175							
8/12/2007	4:00	11.964	9.895	6.858	11.216	12.871	13.073	11.657	10.887		7.177							
8/12/2007	8:00	11.955	9.901	6.871	11.214	12.874	13.073	11.659	10.887		7.179							
8/12/2007	12:00	11.986	9.916	6.883	11.216	12.866	13.069	11.664	10.885		7.181							
8/12/2007	16:00	11.939	9.926	6.889	11.216	12.863	13.073	11.668	10.906		7.185							
8/12/2007	20:00	11.966	9.933	6.901	11.237	12.876	13.083	11.668	10.906		7.201							
8/13/2007	0:00	11.945	9.945	6.92	11.245	12.89	13.092	11.676	10.911		7.213							
8/13/2007	4:00	11.968	9.955	6.93	11.245	12.888	13.092		10.913		7.217							
8/13/2007	8:00	11.955	9.96	6.94	11.241	12.89	13.094		10.911		7.221							
8/13/2007	12:00	11.974	9.976	6.955	11.253	12.892	13.098		10.913		7.225							
8/13/2007	16:00	11.982	9.986	6.961	11.264	12.884	13.102		10.939		7.227							
8/13/2007	20:00	11.972	9.993	6.969	11.276	12.893	13.113		10.949		7.244							
8/14/2007	0:00	11.935	10.003	6.981	11.272	12.904	13.121		10.954		7.256							
8/14/2007	4:00	11.929	10.011	6.991	11.266	12.907	13.123		10.956		7.262							
8/14/2007	8:00	11.902	10.018	7	11.268	12.911	13.123		10.954		7.268							
8/14/2007	12:00	12.013	10.03	7.008	11.264	12.912	13.129		10.956		7.272							
8/14/2007	16:00	12.08	10.047	7.022	11.286	12.907	13.125		10.971		7.28							
8/14/2007	20:00	12.056	10.059	7.034	11.313	12.922	13.144		10.977		7.296							
8/15/2007	0:00	12.002	10.073	7.051	11.323	12.935	13.155		10.988		7.313							
8/15/2007	4:00	11.996	10.082	7.063	11.321	12.939	13.159		10.994		7.319							
8/15/2007	8:00	11.97	10.09	7.069	11.319	12.944	13.161		10.994		7.327							
8/15/2007	12:00	12.068	10.101	7.079	11.323	12.954	13.169		10.99		7.331							
8/15/2007	16:00	12.133	10.119	7.092	11.348	12.96	13.176		11.009		7.34							
8/15/2007	20:00	12.092	10.134	7.106	11.37	12.978	13.195		11.046		7.359							
8/16/2007	0:00	12.035	10.15	7.122	11.375	12.992	13.203		11.05		7.374							
8/16/2007	4:00	11.998	10.163	7.139	11.375	13.004	13.213		11.057		7.382							
8/16/2007	8:00	12.011	10.175	7.149	11.379	13.013	13.22		11.054		7.392							
8/16/2007	12:00	12.045	10.19	7.163	11.383	13.029	13.239		11.078		7.4							
8/16/2007	16:00	12.074	10.206	7.18	11.401	13.062	13.26		11.097		7.41							
8/16/2007	20:00	12.061	10.217	7.192	11.414	13.071	13.27		11.108		7.425							
8/17/2007	0:00	12.056	10.231	7.208	11.42	13.084	13.281		11.117		7.439							
8/17/2007	4:00	12.037	10.244	7.225	11.432	13.097	13.289		11.125		7.449							
8/17/2007	8:00	12.025	10.252	7.235	11.436	13.102	13.295		11.132		7.457							
8/17/2007	12:00	12.056	10.264	7.251	11.447	13.113	13.304		11.136		7.467							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
8/17/2007	16:00	12.149	10.279	7.262	11.457	13.118	13.316		11.157		7.471							
8/17/2007	20:00	12.16	10.291	7.272	11.481	13.13	13.331		11.172		7.491							
8/18/2007	0:00	12.125	10.302	7.288	11.494	13.145	13.341		11.181		7.504							
8/18/2007	4:00	12.147	10.31	7.3	11.5	13.154	13.35		11.189		7.516							
8/18/2007	8:00	12.125	10.318	7.309	11.506	13.161	13.356		11.196		7.526							
8/18/2007	12:00	12.199	10.314	7.317	11.512	13.163	13.358		11.196		7.528							
8/18/2007	16:00	12.239	10.337	7.327	11.527	13.169	13.369		11.211		7.541							
8/18/2007	20:00	12.219	10.343	7.333	11.537	13.177	13.377		11.217		7.546							
8/19/2007	0:00	12.209	10.351	7.341	11.541	13.188	13.386		11.226		7.557							
8/19/2007	4:00	12.223	10.358	7.352	11.552	13.196	13.394		11.235		7.567							
8/19/2007	8:00	12.223	10.364	7.36	11.557	13.206	13.4		11.241		7.575							
8/19/2007	12:00	12.264	10.37	7.37	11.56	13.209	13.402		11.243		7.579							
8/19/2007	16:00	12.335	10.378	7.374	11.57	13.211	13.409		11.254		7.583							
8/19/2007	20:00	12.335	10.389	7.384	11.591	13.227	13.423		11.267		7.602							
8/20/2007	0:00	12.333	10.399	7.397	11.601	13.239	13.436		11.28		7.613							
8/20/2007	4:00	12.352	10.405	7.405	11.603	13.248	13.444		11.286		7.621							
8/20/2007	8:00	12.335	10.413	7.413	11.611	13.259	13.453		11.29		7.63							
8/20/2007	12:00	12.372	10.418	7.419	11.611	13.276	13.463		11.299		7.632							
8/20/2007	16:00	12.47	10.426	7.423	11.636	13.284	13.472		11.307		7.636							
8/20/2007	20:00	12.403	10.44	7.438	11.675	13.31	13.499		11.329		7.656							
8/21/2007	0:00	12.393	10.449	7.45	11.679	13.321	13.505		11.34		7.667							
8/21/2007	4:00	12.37	10.461	7.464	11.675	13.332	13.514		11.35		7.679							
8/21/2007	8:00	12.323	10.474	7.477	11.679	13.348	13.526		11.361		7.69							
8/21/2007	12:00	12.368	10.484	7.487	11.683	13.372	13.541		11.359		7.695							
8/21/2007	16:00	12.423	10.501	7.501	11.695	13.389	13.56		11.374		7.703							
8/21/2007	20:00	12.474	10.517	7.513	11.726	13.395	13.574		11.395		7.721							
8/22/2007	0:00	12.376	10.536	7.534	11.745	13.417	13.589		11.415		7.742							
8/22/2007	4:00	12.378	10.552	7.55	11.753	13.427	13.598		11.425		7.754							
8/22/2007	8:00	12.368	10.563	7.565	11.761	13.438	13.608		11.436		7.766							
8/22/2007	12:00	12.423	10.579	7.581	11.772	13.446	13.614		11.436		7.77							
8/22/2007	16:00	12.495	10.598	7.595	11.786	13.451	13.625		11.464		7.782							
8/22/2007	20:00	12.497	10.612	7.608	11.807	13.464	13.644		11.481		7.801							
8/23/2007	0:00	12.295	10.581	7.593	11.788	13.441	13.619		11.479		7.825							
8/23/2007	4:00	12.44	10.592	7.591	11.784	13.44	13.629		11.453		7.821							
8/23/2007	8:00	12.472	10.583	7.585	11.77	13.443	13.635		11.456		7.793							
8/23/2007	12:00	12.534	10.575	7.575	11.763	13.451	13.631		11.455		7.774							
8/23/2007	16:00	12.517	10.577	7.569	11.776	13.456	13.635		11.453		7.768							
8/23/2007	20:00	12.531	10.571	7.565	11.774	13.457	13.644		11.462		7.768							
8/24/2007	0:00	12.487	10.565	7.56	11.774	13.464	13.654		11.473		7.76							
8/24/2007	4:00	12.397	10.445	7.414	11.655	13.328	13.558		11.316		7.715							
8/24/2007	8:00	12.309	10.318	7.318	11.601	13.297	13.535		11.288		7.682							
8/24/2007	12:00	12.301	10.206	7.227	11.537	13.27	13.511		11.282		7.711							
8/24/2007	16:00	12.25	10.096	6.962	11.472	13.227	13.459		11.269		7.535							
8/24/2007	20:00	12.162	9.966	6.888	11.383	13.15	13.413		11.194		7.494							
8/25/2007	0:00	12.072	9.854	6.747	11.322	13.105	13.379		11.166		7.451							
8/25/2007	4:00	12.054	9.761	6.59	11.256	13.06	13.339		11.136		7.407							
8/25/2007	8:00	11.939	9.686	6.6	11.196	13.023	13.306		11.102		7.365							
8/25/2007	12:00	11.931	9.618	6.594	11.137	12.985	13.266		11.063		7.23							
8/25/2007	16:00	12.056	9.559	6.598	11.083	12.946	13.23		11.031		7.169							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
8/25/2007	20:00	12.009	9.506	6.52	11.05	12.916	13.199		10.992		7.132							
8/26/2007	0:00	11.927	9.464	6.483	11.011	12.892	13.165		10.956		7.1							
8/26/2007	4:00	11.886	9.425	6.428	10.964	12.858	13.129		10.917		7.063							
8/26/2007	8:00	11.827	9.39	6.418	10.921	12.824	13.092		10.883		7.033							
8/26/2007	12:00	11.833	9.361	6.469	10.882	12.795	13.06		10.847		7.031							
8/26/2007	16:00	11.888	9.329	6.543	10.843	12.757	13.027		10.814		6.964							
8/26/2007	20:00	11.868	9.305	6.506	10.82	12.733	13.001		10.787		6.945							
8/27/2007	0:00	11.788	9.288	6.41	10.796	12.717	12.976		10.761		6.931							
8/27/2007	4:00	11.745	9.273	6.371	10.763	12.693	12.951		10.733		6.913							
8/27/2007	8:00	11.714	9.257	6.373	10.734	12.672	12.928		10.707		6.893							
8/27/2007	12:00	11.733	9.251	6.408	10.711	12.654	12.911		10.684		6.878							
8/27/2007	16:00	11.751	9.244	6.467	10.693	12.643	12.899		10.673		6.862							
8/27/2007	20:00	11.733	9.24	6.404	10.689	12.635	12.888		10.666		6.858							
8/28/2007	0:00	11.723	9.245	6.308	10.678	12.629	12.875		10.651		6.858							
8/28/2007	4:00	11.702	9.247	6.324	10.66	12.611	12.857		10.634		6.85							
8/28/2007	8:00	11.68	9.249	6.324	10.646	12.598	12.842		10.617		6.842							
8/28/2007	12:00	11.659	9.259	6.377	10.633	12.589	12.833		10.6		6.84							
8/28/2007	16:00	11.649	9.265	6.457	10.623	12.576	12.827		10.6		6.834							
8/28/2007	20:00	11.657	9.273	6.412	10.629	12.568	12.823		10.6		6.838							
8/29/2007	0:00	11.657	9.286	6.365	10.631	12.571	12.819		10.6		6.846							
8/29/2007	4:00	11.649	9.302	6.426	10.625	12.566	12.808		10.591		6.848							
8/29/2007	8:00	11.637	9.307	6.398	10.617	12.561	12.8		10.583		6.846							
8/29/2007	12:00	11.608	9.302	6.396	10.598	12.523	12.766		10.548		6.856							
8/29/2007	16:00	11.594	9.294	6.445	10.586	12.502	12.756		10.527		6.891							
8/29/2007	20:00	11.586	9.284	6.398	10.576	12.493	12.749		10.525		6.868							
8/30/2007	0:00	11.582	9.28	6.392	10.567	12.486	12.745		10.525		6.824							
8/30/2007	4:00	11.571	9.273	6.388	10.559	12.478	12.735		10.518		6.811							
8/30/2007	8:00	11.557	9.265	6.369	10.547	12.467	12.722		10.508		6.801							
8/30/2007	12:00	11.547	9.263	6.422	10.539	12.452	12.712		10.495		6.791							
8/30/2007	16:00	11.533	9.261	6.521	10.541	12.44	12.705		10.493		6.783							
8/30/2007	20:00	11.539	9.255	6.494	10.541	12.443	12.695		10.484		6.783							
8/31/2007	0:00	11.533	9.257	6.416	10.535	12.437	12.689		10.478		6.783							
8/31/2007	4:00	11.522	9.259	6.396	10.526	12.427	12.682		10.471		6.783							
8/31/2007	8:00	11.506	9.255	6.381	10.514	12.417	12.672		10.463		6.777							
8/31/2007	12:00	11.496	9.257	6.428	10.506	12.407	12.666		10.452		6.773							
8/31/2007	16:00	11.488	9.263	6.531	10.508	12.401	12.659		10.452		6.769							
8/31/2007	20:00	11.506	9.267	6.49	10.516	12.406	12.661		10.461		6.777							
9/1/2007	0:00	11.504	9.273	6.41	10.52	12.409	12.661		10.461		6.783							
9/1/2007	4:00	11.5	9.28	6.404	10.516	12.406	12.659		10.458		6.787							
9/1/2007	8:00	11.492	9.284	6.42	10.51	12.401	12.657		10.443		6.785							
9/1/2007	12:00	11.482	9.29	6.482	10.506	12.404	12.663		10.446		6.787							
9/1/2007	16:00	11.482	9.3	6.59	10.51	12.416	12.672		10.465		6.787							
9/1/2007	20:00	11.498	9.307	6.562	10.522	12.411	12.672		10.476		6.795							
9/2/2007	0:00	11.5	9.317	6.469	10.526	12.411	12.672		10.476		6.805							
9/2/2007	4:00	11.5	9.327	6.465	10.53	12.409	12.672		10.473		6.813							
9/2/2007	8:00	11.496	9.332	6.467	10.526	12.406	12.668		10.473		6.817							
9/2/2007	12:00	11.49	9.344	6.527	10.524	12.398	12.663		10.467		6.819							
9/2/2007	16:00	11.484	9.356	6.637	10.537	12.391	12.663		10.473		6.824							
9/2/2007	20:00	11.502	9.365	6.596	10.549	12.401	12.672		10.478		6.838							

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
9/3/2007	0:00	11.507	9.377	6.521	10.551	12.408	12.676		10.484		6.85							
9/3/2007	4:00	11.509	9.39	6.531	10.555	12.413	12.68		10.488		6.86							
9/3/2007	8:00	11.51	9.402	6.541	10.557	12.416	12.682		10.493		6.868							
9/3/2007	12:00	11.504	9.414	6.609	10.557	12.411	12.68		10.491		6.872							
9/3/2007	16:00	11.502	9.425	6.738	10.578	12.406	12.684		10.501		6.876							
9/3/2007	20:00	11.523	9.437	6.721	10.594	12.416	12.693		10.508		6.891							
9/4/2007	0:00	11.531	9.448	6.666	10.596	12.424	12.697		10.516		6.903							
9/4/2007	4:00	11.531	9.46	6.687	10.596	12.425	12.702		10.521		6.911							
9/4/2007	8:00	11.529	9.47	6.652	10.594	12.43	12.705		10.527		6.919							
9/4/2007	12:00	11.522	9.485	6.728	10.592	12.417	12.697		10.521		6.923							
9/4/2007	16:00	11.524	9.495	6.842	10.6	12.411	12.693		10.518		6.929							
9/4/2007	20:00	11.545	9.504	6.824	10.623	12.414	12.699		10.533		6.943							
9/5/2007	0:00	11.551	9.512	6.756	10.633	12.425	12.708		10.54		6.954							
9/5/2007	4:00	11.551	9.522	6.762	10.635	12.432	12.716		10.542		6.962							
9/5/2007	8:00	11.554	9.531	6.738	10.641	12.438	12.722		10.544		6.97							
9/5/2007	12:00	11.553	9.541	6.797	10.64	12.438	12.718		10.548		6.976							
9/5/2007	16:00	11.562	9.551	6.86	10.656	12.451	12.716		10.555		6.982							
9/5/2007	20:00	11.58	9.56	6.83	10.68	12.467	12.735		10.576		6.994							
9/6/2007	0:00	11.59	9.572	6.767	10.693	12.477	12.747		10.591		7.004							
9/6/2007	4:00	11.592	9.58	6.773	10.683	12.478	12.754		10.596		7.01							
9/6/2007	8:00	11.601	9.588	6.76	10.685	12.483	12.76		10.598		7.021							
9/6/2007	12:00	11.602	9.597	6.797	10.687	12.493	12.76		10.598		7.027							
9/6/2007	16:00	11.612	9.605	6.922	10.695	12.506	12.764		10.611		7.031							
9/6/2007	20:00	11.627	9.611	6.934	10.706	12.525	12.785		10.634		7.043							
9/7/2007	0:00	11.547	9.379	6.585	10.494	12.353	12.607		10.441		7.059							
9/7/2007	4:00	11.441	9.276	6.487	10.475	12.336	12.588		10.403		7.053							
9/7/2007	8:00	11.416	9.093	6.318	10.43	12.259	12.561		10.386		7.01							
9/7/2007	12:00	11.394	8.94	6.146	10.364	12.198	12.525		10.362		7.014							
9/7/2007	16:00	11.357	8.803	5.99	10.292	12.137	12.485		10.336		6.742			9.658				9.669
9/7/2007	20:00	11.334	8.681	5.863	10.232	12.068	12.437		10.317		6.588			9.555	9.359	11.498		9.732
9/8/2007	0:00	11.292	8.575	5.765	10.167	11.993	12.37		10.268		6.515			9.462	9.247	11.41		9.645
9/8/2007	4:00	11.241	8.478	5.681	10.091	11.915	12.3		10.212		6.44			9.372	9.146	11.325		9.571
9/8/2007	8:00	11.186	8.389	5.616	10.023	11.845	12.233		10.147		6.368			9.299	9.056	11.246		9.501
9/8/2007	12:00	11.129	8.314	5.558	9.955	11.782	12.174		10.087		6.301			9.237	8.978	11.173		9.466
9/8/2007	16:00	11.073	8.244	5.505	9.893	11.734	12.128		10.051		6.232			9.181	8.908	11.1		9.416
9/8/2007	20:00	11.042	8.188	5.462	9.85	11.686	12.078		10.008		6.184			9.133	8.848	11.036		9.373
9/9/2007	0:00	10.999	8.146	5.438	9.803	11.64	12.021		9.959		6.139			9.086	8.795	10.977		9.305
9/9/2007	4:00	10.948	8.107	5.415	9.75	11.592	11.964		9.907		6.092			9.038	8.747	10.921		9.243
9/9/2007	8:00	10.908	8.076	5.399	9.706	11.551	11.916		9.86		6.051			9.001	8.709	10.873		9.195
9/9/2007	12:00	10.869	8.053	5.393	9.666	11.516	11.872		9.815		6.013			8.97	8.673	10.834		9.16
9/9/2007	16:00	10.82	8.028	5.381	9.618	11.472	11.824		9.772		5.97			8.942	8.639	10.786		9.135
9/9/2007	20:00	10.787	8.007	5.373	9.591	11.433	11.784		9.729		5.938			8.924	8.605	10.742		9.104
9/10/2007	0:00	10.753	7.993	5.37	9.562	11.402	11.746		9.695		5.913			8.903	8.576	10.705		9.059
9/10/2007	4:00	10.716	7.978	5.368	9.525	11.369	11.708		9.659		5.885			8.878	8.551	10.667		9.024
9/10/2007	8:00	10.679	7.964	5.366	9.497	11.337	11.673		9.618		5.86			8.859	8.528	10.634		8.993
9/10/2007	12:00	10.648	7.958	5.368	9.47	11.318	11.658		9.596		5.84			8.847	8.511	10.609		8.974
9/10/2007	16:00	10.619	7.945	5.364	9.443	11.302	11.631		9.571		5.812			8.82	8.443	10.594		8.929
9/10/2007	20:00	10.597	7.939	5.368	9.421	11.274	11.599		9.551		5.793			8.817	8.467	10.546		8.923
9/11/2007	0:00	10.573	7.935	5.373	9.402	11.253	11.574		9.528		5.781			8.81	8.452	10.528		8.9

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
9/11/2007	4:00	10.548	7.929	5.377	9.378	11.226	11.545		9.5		5.765			8.794	8.435	10.501		8.873
9/11/2007	8:00	10.52	7.922	5.378	9.355	11.2	11.517		9.474		5.749			8.781	8.418	10.48		8.852
9/11/2007	12:00	10.495	7.92	5.384	9.334	11.183	11.496		9.45		5.737			8.778	8.412	10.463		8.855
9/11/2007	16:00	10.476	7.92	5.389	9.325	11.17	11.475		9.433		5.722			8.778	8.403	10.446		8.859
9/11/2007	20:00	10.47	7.924	5.395	9.322	11.157	11.458		9.423		5.72			8.778	8.403	10.43		8.852
9/12/2007	0:00	10.458	7.933	5.407	9.316	11.144	11.446		9.412		5.72			8.774	8.406	10.417		8.819
9/12/2007	4:00	10.44	7.939	5.422	9.304	11.13	11.429		9.397		5.716			8.769	8.403	10.405		8.797
9/12/2007	8:00	10.421	7.945	5.427	9.289	11.114	11.412		9.378		5.71			8.762	8.404	10.394		8.778
9/12/2007	12:00	10.416	7.953	5.442	9.283	11.103	11.4		9.363		5.704			8.764	8.408	10.388		8.793
9/12/2007	16:00	10.385	7.962	5.452	9.277	11.087	11.389		9.356		5.696			8.774	8.408	10.378		8.795
9/12/2007	20:00	10.385	7.966	5.458	9.275	11.08	11.383		9.352		5.696			8.778	8.406	10.363		8.797
9/13/2007	0:00	10.377	7.976	5.471	9.273	11.069	11.375		9.345		5.702			8.776	8.412	10.357		8.774
9/13/2007	4:00	10.362	7.984	5.479	9.263	11.058	11.362		9.335		5.696			8.773	8.416	10.349		8.755
9/13/2007	8:00	10.35	7.989	5.485	9.255	11.043	11.347		9.322		5.694			8.769	8.412	10.338		8.741
9/13/2007	12:00	10.332	7.999	5.495	9.242	11.034	11.341		9.309		5.692			8.773	8.418	10.338		8.751
9/13/2007	16:00	10.316	8.009	5.505	9.242	11.019	11.326		9.307		5.686			8.783	8.422	10.334		8.77
9/13/2007	20:00	10.326	8.016	5.517	9.251	11.011	11.318		9.305		5.696			8.794	8.427	10.33		8.774
9/14/2007	0:00	10.324	8.034	5.536	9.259	11.021	11.318				5.708			8.797	8.441	10.336		8.758
9/14/2007	4:00	10.324	8.057	5.559	9.262	11.029	11.32				5.718			8.806	8.454	10.344		8.747
9/14/2007	8:00	10.318	8.074	5.583	9.267	11.034	11.32				5.722			8.813	8.465	10.353		8.743
9/14/2007	12:00	10.324	8.101	5.612	9.267	11.05	11.32				5.73			8.831	8.481	10.365		8.743
9/14/2007	16:00	10.316	8.125	5.637	9.283	11.05	11.314				5.735			8.848	8.494	10.374		8.758
9/14/2007	20:00	10.326	8.146	5.663	9.294	11.039	11.305				5.747			8.869	8.507	10.382		8.778
9/15/2007	0:00	10.329	8.169	5.688	9.304	11.048	11.318				5.763			8.883	8.524	10.39		8.774
9/15/2007	4:00	10.331	8.19	5.712	9.312	11.056	11.326				5.777			8.897	8.536	10.401		8.774
9/15/2007	8:00	10.325	8.208	5.733	9.316	11.056	11.335				5.783			8.908	8.545	10.407		8.78
9/15/2007	12:00	10.328	8.227	5.753	9.32	11.047	11.326				5.793			8.925	8.559	10.415		8.801
9/15/2007	16:00	10.317	8.237	5.769	9.327	11.023	11.318				5.798			8.943	8.566	10.411		8.826
9/15/2007	20:00	10.328	8.248	5.78	9.339	11.026	11.32				5.812			8.954	8.568	10.411		8.826
9/16/2007	0:00	10.33	8.258	5.79	9.345	11.034	11.328				5.824			8.963	8.574	10.417		8.824
9/16/2007	4:00	10.332	8.266	5.8	9.349	11.037	11.335				5.834			8.969	8.58	10.417		8.822
9/16/2007	8:00	10.332	8.27	5.806	9.349	11.035	11.337				5.84			8.973	8.578	10.419		8.824
9/16/2007	12:00	10.324	8.275	5.813	9.347	11.034	11.341				5.844			8.973	8.582	10.421		8.842
9/16/2007	16:00	10.33	8.281	5.814	9.355	11.034	11.341				5.848			8.989	8.585	10.419		8.863
9/16/2007	20:00	10.33	8.283	5.821	9.366	11.029	11.345				5.854			8.992	8.578	10.417		8.863
9/17/2007	0:00	10.332	8.289	5.823	9.368	11.032	11.347				5.865			8.996	8.584	10.421		8.863
9/17/2007	4:00	10.334	8.295	5.831	9.374	11.04	11.351				5.875			9.001	8.587	10.428		8.867
9/17/2007	8:00	10.334	8.3	5.839	9.378	11.043	11.347				5.881			9.005	8.589	10.44		8.869
9/17/2007	12:00	10.338	8.308	5.85	9.378	11.037	11.347				5.887			9.015	8.597	10.448		8.894
9/17/2007	16:00	10.331	8.322	5.862	9.39	11.019	11.341				5.891			9.027	8.606	10.452		8.919
9/17/2007	20:00	10.352	8.333	5.872	9.411	11.015	11.337				5.909			9.041	8.622	10.454		8.919
9/18/2007	0:00	10.356	8.349	5.886	9.421	11.034	11.347				5.921			9.045	8.639	10.465		8.906
9/18/2007	4:00	10.36	8.364	5.902	9.425	11.048	11.36				5.932			9.056	8.656	10.475		8.906
9/18/2007	8:00	10.36	8.368	5.904	9.421	11.05	11.36				5.932			9.066	8.701	10.473		8.762
9/18/2007	12:00	10.358	8.382	5.919	9.425	11.058	11.362				5.94			9.063	8.673	10.511		8.91
9/18/2007	16:00	10.383	8.389	5.919	9.425	11.059	11.366				6.007			9.068	8.746	10.5		8.883
9/18/2007	20:00	10.37	8.403	5.936	9.433	11.07	11.379				5.964			9.082	8.679	10.488		8.927
9/19/2007	0:00	10.378	8.415	5.949	9.438	11.088	11.389				5.946			9.084	8.678	10.479		8.91
9/19/2007	4:00	10.387	8.426	5.97	9.448	11.103	11.398				5.964			9.099	8.7	10.517		8.786

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
9/19/2007	8:00	10.391	8.438	5.989	9.458	11.119	11.412				5.98			9.11	8.709	10.533		8.919
9/19/2007	12:00	10.403	8.451	6.007	9.462	11.146	11.425				5.991			9.117	8.717	10.55		8.942
9/19/2007	16:00	10.405	8.463	6.028	9.464	11.154	11.444				5.997			9.133	8.728	10.561		8.964
9/19/2007	20:00	10.434	8.472	6.044	9.489	11.167	11.461				6.013			9.152	8.739	10.567		8.983
9/20/2007	0:00	10.442	8.486	6.058	9.497	11.176	11.467				6.027			9.161	8.751	10.58		8.974
9/20/2007	4:00	10.448	8.496	6.073	9.505	11.181	11.473				6.039			9.17	8.763	10.588		8.978
9/20/2007	8:00	10.45	8.505	6.085	9.513	11.189	11.486				6.049			9.179	8.772	10.6		8.985
9/20/2007	12:00	10.446	8.515	6.093	9.518	11.191	11.498				6.056			9.184	8.778	10.606		9.009
9/20/2007	16:00	10.454	8.523	6.101	9.53	11.196	11.515				6.062			9.2	8.785	10.615		9.032
9/20/2007	20:00	10.477	8.53	6.11	9.549	11.204	11.526				6.078			9.212	8.795	10.615		9.042
9/21/2007	0:00	10.485	8.538	6.116	9.557	11.212	11.53				6.09			9.216	8.808	10.623		9.032
9/21/2007	4:00	10.487	8.546	6.122	9.561	11.213	11.53				6.1			9.219	8.82	10.629		9.028
9/21/2007	8:00	10.491	8.556	6.13	9.567	11.218	11.536				6.11			9.224	8.829	10.642		9.032
9/21/2007	12:00	10.485	8.563	6.136	9.567	11.215	11.536				6.112			9.23	8.84	10.65		9.055
9/21/2007	16:00	10.493	8.573	6.142	9.581	11.212	11.54				6.119			9.242	8.847	10.658		9.075
9/21/2007	20:00	10.516	8.587	6.154	9.602	11.226	11.549				6.137			9.258	8.863	10.669		9.084
9/22/2007	0:00	10.53	8.608	6.173	9.618	11.252	11.561				6.153			9.268	8.882	10.69		9.08
9/22/2007	4:00	10.538	8.625	6.191	9.631	11.266	11.57				6.165			9.279	8.898	10.704		9.078
9/22/2007	8:00	10.55	8.646	6.212	9.645	11.284	11.587				6.179			9.291	8.917	10.725		9.084
9/22/2007	12:00	10.553	8.668	6.23	9.649	11.271	11.574				6.186			9.307	8.934	10.742		9.113
9/22/2007	16:00	10.548	8.683	6.245	9.661	11.248	11.561				6.192			9.328	8.945	10.752		9.135
9/22/2007	20:00	10.567	8.699	6.259	9.688	11.268	11.574				6.21			9.346	8.962	10.767		9.156
9/23/2007	0:00	10.577	8.714	6.277	9.702	11.287	11.591				6.226			9.356	8.981	10.777		9.15
9/23/2007	4:00	10.583	8.728	6.29	9.71	11.301	11.605				6.236			9.363	8.995	10.785		9.15
9/23/2007	8:00	10.593	8.743	6.302	9.721	11.317	11.62				6.249			9.376	9.008	10.798		9.16
9/23/2007	12:00	10.602	8.759	6.312	9.727	11.324	11.631				6.255			9.388	9.022	10.815		9.191
9/23/2007	16:00	10.606	8.768	6.318	9.741	11.327	11.639				6.259			9.402	9.031	10.825		9.214
9/23/2007	20:00	10.626	8.778	6.331	9.76	11.343	11.656				6.277			9.416	9.044	10.835		9.227
9/24/2007	0:00	10.638	8.791	6.341	9.776	11.359	11.668				6.289			9.423	9.062	10.846		9.206
9/24/2007	4:00	10.644	8.799	6.349	9.78	11.365	11.675				6.299			9.428	9.073	10.852		9.214
9/24/2007	8:00	10.644	8.811	6.357	9.791	11.372	11.677				6.307			9.437	9.082	10.867		9.249
9/24/2007	12:00	10.651	8.822	6.365	9.799	11.341	11.658				6.32			9.423	9.096	10.881		9.264
9/24/2007	16:00	10.642	8.832	6.371	9.809	11.236	11.629				6.322			9.453	9.105	10.89		9.274
9/24/2007	20:00	10.655	8.844	6.384	9.828	11.24	11.626				6.34			9.465	9.119	10.896		9.284
9/25/2007	0:00	10.663	8.861	6.398	9.84	11.303	11.647				6.354			9.479	9.136	10.917		9.278
9/25/2007	4:00	10.669	8.873	6.412	9.852	11.343	11.668				6.364			9.488	9.151	10.931		9.28
9/25/2007	8:00	10.677	8.89	6.427	9.867	11.361	11.687				6.375			9.467	9.168	10.946		9.286
9/25/2007	12:00	10.695	8.909	6.445	9.883	11.37	11.7				6.391			9.498	9.18	10.971		9.291
9/25/2007	16:00	10.691	8.925	6.453	9.887	11.289	11.694				6.391			9.505	9.195	10.983		9.311
9/25/2007	20:00	10.708	8.938	6.47	9.91	11.29	11.694				6.405			9.544	9.201	10.994		9.328
9/26/2007	0:00	10.72	8.958	6.494	9.926	11.362	11.715				6.423			9.56	9.22	11.014		9.332
9/26/2007	4:00	10.73	8.971	6.511	9.939	11.402	11.731				6.434			9.571	9.227	11.025		9.336
9/26/2007	8:00	10.738	8.983	6.521	9.944	11.423	11.75				6.442			9.553	9.237	11.039		9.34
9/26/2007	12:00	10.753	8.994	6.529	9.94	11.401	11.761				6.448			9.542	9.248	11.054		9.365
9/26/2007	16:00	10.749	8.998	6.531	9.934	11.385	11.765				6.446			9.407	9.256	11.064		9.355
9/26/2007	20:00	10.773	8.996	6.527	9.928	11.412	11.778				6.458			9.43	9.265	11.068		9.332
9/27/2007	0:00	10.787	9.002	6.533	9.944	11.457	11.794				6.468			9.5	9.279	11.083		9.334
9/27/2007	4:00	10.798	9.012	6.541	9.957	11.484	11.811				6.476			9.541	9.288	11.091		9.344
9/27/2007	8:00	10.804	9.021	6.55	9.969	11.497	11.826				6.484			9.555	9.298	11.106		9.353

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
9/27/2007	12:00	10.806	9.035	6.56	9.959	11.436	11.826				6.486			9.477	9.311	11.122		9.34
9/27/2007	16:00	10.812	9.041	6.562	9.926	11.462	11.828				6.48			9.381	9.321	11.137		9.284
9/27/2007	20:00	10.832	9.039	6.558	9.897	11.457	11.845				6.489			9.34	9.338	11.145		9.262
9/28/2007	0:00	10.847	9.048	6.566	9.932	11.516	11.864				6.5			9.444	9.359	11.164		9.289
9/28/2007	4:00	10.857	9.064	6.58	9.963	11.553	11.885				6.511			9.509	9.374	11.179		9.322
9/28/2007	8:00	10.863	9.079	6.597	9.986	11.58	11.899				6.521			9.549	9.387	11.193		9.346
9/28/2007	12:00	10.871	9.099	6.609	9.937	11.577	11.908				6.523			9.46	9.408	11.214		9.299
9/28/2007	16:00	10.865	9.108	6.611	9.93	11.55	11.914				6.515			9.412	9.42	11.218		9.21
9/28/2007	20:00	10.883	9.112	6.611	9.922	11.574	11.925				6.517			9.398	9.435	11.226		9.152
9/29/2007	0:00	10.896	9.122	6.617	9.957	11.613	11.946				6.523			9.477	9.454	11.241		9.249
9/29/2007	4:00	10.904	9.131	6.629	9.989	11.633	11.96				6.535			9.535	9.469	11.251		9.309
9/29/2007	8:00	10.91	9.143	6.638	9.994	11.654	11.975				6.545			9.572	9.479	11.26		9.34
9/29/2007	12:00	10.92	9.159	6.648	10.002	11.652	11.971				6.552			9.56	9.49	11.276		9.301
9/29/2007	16:00	10.922	9.17	6.658	9.982	11.627	11.966				6.551			9.539	9.502	11.291		9.225
9/29/2007	20:00	10.916	9.178	6.664	9.996	11.644	11.977				6.559			9.555	9.519	11.297		9.27
9/30/2007	0:00	10.937	9.189	6.672	10.035	11.675	11.998				6.574			9.602	9.536	11.308		9.34
9/30/2007	4:00	10.949	9.199	6.687	10.066	11.699	12.017				6.59			9.639	9.548	11.32		9.386
9/30/2007	8:00	10.961	9.205	6.695	10.092	11.71	12.027				6.602			9.671	9.553	11.331		9.421
9/30/2007	12:00	10.967	9.213	6.701	10.111	11.721	12.036				6.606			9.688	9.557	11.341		9.448
9/30/2007	16:00	10.967	9.207	6.697	10.119	11.723	12.032				6.726			9.687	9.553	11.316		9.454
9/30/2007	20:00	10.994	9.23	6.713	10.146	11.749	12.059				6.635			9.722	9.563	11.358		9.501
10/1/2007	0:00	11.014	9.24	6.736	10.169	11.776	12.076				6.647			9.75	9.574	11.376		9.52
10/1/2007	4:00	11.035	9.255	6.756	10.189	11.8	12.095				6.666			9.771	9.591	11.397		9.536
10/1/2007	8:00	11.053	9.265	6.774	10.204	11.816	12.105				6.678			9.789	9.601	11.414		9.553
10/1/2007	12:00	11.061	9.28	6.791	10.193	11.797	12.099				6.686			9.794	9.612	11.435		9.545
10/1/2007	16:00	11.08	9.294	6.801	10.181	11.808	12.111				6.69			9.774	9.622	11.447		9.476
10/1/2007	20:00	11.088	9.3	6.812	10.156	11.814	12.122				6.7			9.76	9.633	11.449		9.439
10/2/2007	0:00	11.09	9.303	6.816	10.189	11.834	12.137				6.708			9.783	9.645	11.458		9.503
10/2/2007	4:00	11.094	9.309	6.818	10.212	11.845	12.149				6.718			9.803	9.656	11.466		9.542
10/2/2007	8:00	11.08	9.311	6.819	10.23	11.848	12.158				6.722			9.817	9.66	11.472		9.563
10/2/2007	12:00	11.049	9.267	6.766	10.158	11.805	12.137				6.828			9.804	9.607	11.53		9.468
10/2/2007	16:00	11.047	9.257	6.769	10.175	11.805	12.145				6.726			9.755	9.61	11.439		9.489
10/2/2007	20:00	11.088	9.253	6.758	10.193	11.824	12.153				6.714			9.767	9.618	11.443		9.536
10/3/2007	0:00	11.092	9.247	6.75	10.211	11.838	12.16				6.702			9.774	9.624	11.451		9.553
10/3/2007	4:00	11.098	9.242	6.748	10.222	11.845	12.164				6.694			9.782	9.629	11.455		9.567
10/3/2007	8:00	11.1	9.242	6.746	10.237	11.859	12.17				6.69			9.789	9.635	11.47		9.58
10/3/2007	12:00	11.1	9.242	6.744	10.249	11.88	12.183				6.684			9.792	9.639	11.474		9.596
10/3/2007	16:00	11.078	9.242	6.74	10.251	11.874	12.187				6.672			9.794	9.643	11.474		9.588
10/3/2007	20:00	11.108	9.24	6.74	10.257	11.856	12.193				6.68			9.796	9.649	11.472		9.6
10/4/2007	0:00	11.114	9.24	6.738	10.265	11.864	12.191				6.688			9.803	9.654	11.476		9.609
10/4/2007	4:00	11.116	9.238	6.738	10.274	11.869	12.191				6.692			9.806	9.658	11.478		9.615
10/4/2007	8:00	11.116	9.24	6.738	10.279	11.883	12.187				6.698			9.811	9.662	11.483		9.623
10/4/2007	12:00	11.11	9.242	6.733	10.29	11.891	12.202				6.7			9.815	9.662	11.491		9.642
10/4/2007	16:00	11.12	9.245	6.734	10.292	11.859	12.191				6.698			9.813	9.664	11.493		9.644
10/4/2007	20:00	11.129	9.247	6.738	10.286	11.861	12.191				6.706			9.804	9.668	11.493		9.59
10/5/2007	0:00	11.135	9.253	6.742	10.296	11.877	12.195				6.714			9.813	9.673	11.502		9.625
10/5/2007	4:00	11.137	9.255	6.746	10.306	11.883	12.195				6.718			9.824	9.681	11.506		9.638
10/5/2007	8:00	11.139	9.261	6.75	10.315	11.899	12.206				6.724			9.831	9.687	11.518		9.638
10/5/2007	12:00	11.135	9.269	6.752	10.282	11.872	12.214				6.722			9.825	9.69	11.527		9.597

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
10/5/2007	16:00	11.122	9.274	6.758	10.284	11.84	12.212				6.724			9.815	9.694	11.53		9.537
10/5/2007	20:00	11.139	9.284	6.764	10.292	11.851	12.206				6.733			9.82	9.704	11.539		9.578
10/6/2007	0:00	11.145	9.294	6.776	10.311	11.882	12.212				6.741			9.834	9.717	11.55		9.617
10/6/2007	4:00	11.151	9.3	6.783	10.329	11.903	12.22				6.747			9.847	9.723	11.558		9.638
10/6/2007	8:00	11.153	9.311	6.795	10.343	11.92	12.231				6.757			9.862	9.732	11.568		9.656
10/6/2007	12:00	11.165	9.319	6.801	10.335	11.917	12.229				6.761			9.861	9.742	11.579		9.592
10/6/2007	16:00	11.161	9.329	6.808	10.323	11.89	12.212				6.759			9.855	9.744	11.585		9.566
10/6/2007	20:00	11.18	9.336	6.816	10.337	11.906	12.223				6.767			9.862	9.753	11.591		9.621
10/7/2007	0:00	11.184	9.344	6.822	10.356	11.931	12.235				6.775			9.878	9.761	11.599		9.652
10/7/2007	4:00	11.19	9.348	6.83	10.37	11.944	12.244				6.785			9.889	9.767	11.606		9.673
10/7/2007	8:00	11.2	9.358	6.838	10.387	11.963	12.258				6.793			9.901	9.774	11.616		9.694
10/7/2007	12:00	11.21	9.371	6.851	10.405	11.975	12.265				6.802			9.915	9.78	11.632		9.716
10/7/2007	16:00	11.208	9.383	6.857	10.417	11.979	12.273				6.808			9.924	9.787	11.641		9.735
10/7/2007	20:00	11.245	9.39	6.869	10.434	12	12.292				6.826			9.942	9.797	11.651		9.756
10/8/2007	0:00	11.255	9.402	6.881	10.446	12.015	12.302				6.84			9.954	9.808	11.662		9.764
10/8/2007	4:00	11.235	9.371	6.855	10.424	11.973	12.273				6.867			9.732	9.761	11.397		9.407
10/8/2007	8:00	11.202	9.358	6.859	10.417	11.983	12.288				6.924			9.825	9.762	11.618		9.157
10/8/2007	12:00	11.233	9.35	6.826	10.419	11.976	12.294				6.913			9.915	9.766	11.639		9.739
10/8/2007	16:00	11.235	9.338	6.795	10.415	11.963	12.283				6.816			9.896	9.767	11.641		9.727
10/8/2007	20:00	11.249	9.325	6.777	10.409	11.975	12.288				6.798			9.885	9.766	11.628		9.735
10/9/2007	0:00	11.249	9.315	6.766	10.409	11.973	12.283				6.783			9.878	9.766	11.63		9.733
10/9/2007	4:00	11.243	9.305	6.756	10.407	11.965	12.273				6.767			9.869	9.763	11.624		9.727
10/9/2007	8:00	11.239	9.296	6.75	10.407	11.962	12.267				6.755			9.862	9.757	11.624		9.722
10/9/2007	12:00	11.233	9.296	6.746	10.409	11.941	12.252				6.743			9.861	9.759	11.628		9.731
10/9/2007	16:00	11.219	9.292	6.74	10.374	11.917	12.244				6.726			9.848	9.753	11.622		9.621
10/9/2007	20:00	11.219	9.284	6.738	10.348	11.919	12.235				6.72			9.832	9.755	11.614		9.592
10/10/2007	0:00	11.21	9.284	6.74	10.354	11.92	12.227				6.704			9.827	9.759	11.612		9.609
10/10/2007	4:00	11.202	9.28	6.736	10.362	11.917	12.22				6.7			9.827	9.755	11.607		9.634
10/10/2007	8:00	11.198	9.278	6.733	10.368	11.925	12.218				6.698			9.827	9.753	11.607		9.646
10/10/2007	12:00	11.186	9.28	6.736	10.376	11.88	12.2				6.704			9.832	9.751	11.612		9.689
10/10/2007	16:00	11.161	9.28	6.733	10.35	11.861	12.2				6.698			9.829	9.747	11.607		9.576
10/10/2007	20:00	11.153	9.278	6.736	10.352	11.802	12.174				6.698			9.827	9.745	11.597		9.63
10/11/2007	0:00	11.151	9.28	6.738	10.36	11.824	12.166				6.702			9.832	9.745	11.597		9.646
10/11/2007	4:00	11.149	9.276	6.738	10.368	11.835	12.16				6.702			9.836	9.74	11.595		9.648
10/11/2007	8:00	11.149	9.276	6.738	10.368	11.843	12.158				6.7			9.834	9.736	11.597		9.625
10/11/2007	12:00	11.145	9.28	6.742	10.352	11.846	12.16				6.696			9.834	9.732	11.599		9.605
10/11/2007	16:00	11.12	9.276	6.74	10.354	11.813	12.134				6.688			9.832	9.726	11.593		9.624
10/11/2007	20:00	11.147	9.274	6.74	10.343	11.779	12.107				6.69			9.829	9.721	11.582		9.599
10/12/2007	0:00	11.145	9.274	6.742	10.354	11.802	12.111				6.696			9.832	9.719	11.587		9.628
10/12/2007	4:00	11.143	9.273	6.742	10.36	11.811	12.113				6.698			9.834	9.715	11.585		9.64
10/12/2007	8:00	11.143	9.271	6.742	10.366	11.816	12.113				6.698			9.837	9.709	11.582		9.649
10/12/2007	12:00	11.143	9.273	6.742	10.366	11.795	12.101				6.702			9.839	9.707	11.587		9.638
10/12/2007	16:00	11.137	9.273	6.744	10.358	11.747	12.067				6.698			9.836	9.7	11.58		9.628
10/12/2007	20:00	11.137	9.271	6.744	10.356	11.739	12.059				6.7			9.837	9.694	11.578		9.624
10/13/2007	0:00	11.139	9.273	6.746	10.364	11.766	12.067				6.704			9.839	9.696	11.58		9.642
10/13/2007	4:00	11.09	9.216	6.732	10.331	11.726	12.025				6.729			9.804	9.623	11.603		9.618
10/13/2007	8:00	11.037	9.075	6.412	10.232	11.619	11.914				6.745			9.681	9.669	11.522		9.529
10/13/2007	12:00	11.004	8.903	6.195	10.144	11.539	11.868				6.745			9.632	9.578	11.541		9.537
10/13/2007	16:00	10.9	8.702	5.906	10.072	11.458	11.811				6.751			9.435	9.227	11.235		9.434

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
10/13/2007	20:00	10.861	8.521	5.626	9.986	11.37	11.75				6.647			9.303	9.071	11.145		9.376
10/14/2007	0:00	10.814	8.349	5.378	9.9	11.271	11.679				6.548			9.167	8.922	11.052		9.308
10/14/2007	4:00	10.757	8.185	5.151	9.803	11.162	11.595				6.428			9.025	8.77	10.95		9.225
10/14/2007	8:00	10.691	8.03	4.971	9.708	11.061	11.511				6.316			8.861	8.65	10.823		9.101
10/14/2007	12:00	10.626	7.885	4.786	9.612	10.955	11.416				6.223			8.754	8.509	10.752		9.046
10/14/2007	16:00	10.557	7.746	4.566	9.519	10.854	11.326				6.093			8.628	8.402	10.654		8.965
10/14/2007	20:00	10.489	7.614	4.41	9.427	10.753	11.234				5.942			8.508	8.282	10.552		8.872
10/15/2007	0:00	10.424	7.46	4.231	9.293	10.606	11.11				5.877			8.32	8.127	10.385		8.676
10/15/2007	4:00	10.295	7.305	4.076	9.178	10.49	11.009				5.784			8.271	8.084	10.369		8.672
10/15/2007	8:00	10.205	7.172	3.886	9.082	10.401	10.915				5.682			8.118	7.841	10.198		8.558
10/15/2007	12:00	10.126	7.054	3.755	8.985	10.336	10.837				5.575			7.996	7.773	10.098		8.46
10/15/2007	16:00	10.044	6.946	3.64	8.888	10.272	10.755				5.473			7.884	7.63	9.998		8.363
10/15/2007	20:00	9.974	6.847	3.536	8.796	10.162	10.665				5.329			7.776	7.579	9.904		8.265
10/16/2007	0:00	9.893	6.758	3.437	8.705	10.057	10.573				5.178			7.68	7.491	9.813		8.174
10/16/2007	4:00	9.813	6.673	3.347	8.621	9.964	10.482				5.113			7.586	7.409	9.723		8.085
10/16/2007	8:00	9.733	6.596	3.267	8.537	9.884	10.398				5.009			7.5	7.331	9.64		7.999
10/16/2007	12:00	9.662	6.528	3.198	8.465	9.82	10.321				4.957			7.418	7.262	9.561		7.921
10/16/2007	16:00	9.588	6.462	3.136	8.385	9.742	10.239				4.762			7.349	7.197	9.482		7.846
10/16/2007	20:00	9.527	6.404	3.079	8.315	9.668	10.163				4.502			7.277	7.138	9.403		7.774
10/17/2007	0:00	9.457	6.352	3.028	8.249	9.599	10.09				4.435			7.212	7.081	9.33		7.704
10/17/2007	4:00	9.39	6.302	2.981	8.185	9.53	10.016				4.368			7.152	7.028	9.259		7.63
10/17/2007	8:00	9.314	6.244	2.938	8.111	9.449	9.936				4.325			7.105	7.041	9.217		7.576
10/17/2007	12:00	9.223	6.176	2.86	8.023	9.364	9.853				4.368			7.003	6.803	9.082		7.708
10/17/2007	16:00	9.155	6.082	2.759	7.937	9.316	9.783				4.384			7.034	6.948	9.122		7.481
10/17/2007	20:00	9.082	6.002	2.635	7.861	9.232	9.718				4.394			6.858	6.713	8.907		7.406
10/18/2007	0:00	8.996	5.919	2.592	7.772	9.129	9.632				4.256			6.77	6.624	8.824		7.291
10/18/2007	4:00	8.888	5.85	2.498	7.696	9.041	9.557				4.242			6.705	6.572	8.732		7.227
10/18/2007	8:00	8.835	5.788	2.442	7.63	8.967	9.485				4.217			6.637	6.492	8.657		7.082
10/18/2007	12:00	8.786	5.739	2.401	7.565	8.914	9.414				3.858			6.577	6.431	8.595		7.039
10/18/2007	16:00	8.73	5.695	2.366	7.507	8.864	9.349				3.74			6.514	6.366	8.532		6.981
10/18/2007	20:00	8.673	5.654	2.331	7.448	8.806	9.288				3.687			6.332	6.214	8.335		6.789
10/19/2007	0:00	8.612	5.616	2.305	7.392	8.75	9.233				3.667			6.415	6.275	8.414		6.589
10/19/2007	4:00	8.559	5.581	2.276	7.343	8.701	9.177				3.642			6.371	6.231	8.362		6.806
10/19/2007	8:00	8.501	5.548	2.248	7.293	8.656	9.126				3.614			6.332	6.123	8.318		6.754
10/19/2007	12:00	8.452	5.525	2.229	7.25	8.616	9.078				3.638			6.292	6.163	8.272		6.717
10/19/2007	16:00	8.407	5.502	2.147	7.205	8.564	9.025				3.445			6.259	6.126	8.224		6.672
10/19/2007	20:00	8.377	5.482	2.196	7.166	8.526	8.981				3.402			6.236	6.1	8.181		6.636
10/20/2007	0:00	8.33	5.465	2.188	7.129	8.487	8.935				3.362			6.209	6.075	8.137		6.591
10/20/2007	4:00	8.285	5.446	2.178	7.09	8.446	8.891				3.327			6.181	6.046	8.095		6.55
10/20/2007	8:00	8.24	5.43	2.172	7.057	8.409	8.851				3.295			6.158	6.022	8.056		6.511
10/20/2007	12:00	8.197	5.417	2.156	7.026	8.359	8.801				3.26			6.134	5.999	8.018		6.482
10/20/2007	16:00	8.152	5.399	2.149	6.991	8.293	8.744				3.224			6.114	5.972	7.972		6.451
10/20/2007	20:00	8.121	5.39	2.145	6.967	8.264	8.71				3.205			6.095	5.959	7.937		6.424
10/21/2007	0:00	8.08	5.384	2.145	6.938	8.244	8.675				3.183			6.077	5.941	7.905		6.393
10/21/2007	4:00	8.048	5.374	2.145	6.911	8.215	8.645				3.163			6.062	5.924	7.87		6.362
10/21/2007	8:00	8.019	5.374	2.152	6.893	8.202	8.62				3.15			6.051	5.913	7.849		6.335
10/21/2007	12:00	7.999	5.382	2.165	6.884	8.197	8.603				3.138			6.044	5.907	7.837		6.321
10/21/2007	16:00	7.97	5.393	2.188	6.868	8.106	8.54				3.126			6.046	5.905	7.831		6.286
10/21/2007	20:00	7.962	5.411	2.219	6.864	8.122	8.517				3.126			6.051	5.907	7.828		6.277

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
10/22/2007	0:00	7.943	5.428	2.252	6.858	8.143	8.513				3.118			6.06	5.909	7.822		6.275
10/22/2007	4:00	7.937	5.43	2.272	6.847	8.147	8.492				3.102			6.005	5.81	7.751		6.179
10/22/2007	8:00	7.911	5.446	2.299	6.847	8.149	8.49				3.087			6.049	5.808	7.799		6.048
10/22/2007	12:00	7.903	5.463	2.324	6.845	8.13	8.477				3.094			6.076	5.907	7.806		6.249
10/22/2007	16:00	7.884	5.457	2.33	6.835	8.109	8.458				3.087			6.077	5.903	7.793		6.25
10/22/2007	20:00	7.878	5.459	2.334	6.825	8.112	8.448				3.081			6.083	5.9	7.781		6.245
10/23/2007	0:00	7.872	5.461	2.34	6.821	8.112	8.442				3.081			6.081	5.894	7.772		6.238
10/23/2007	4:00	7.856	5.459	2.342	6.808	8.101	8.429				3.073			6.079	5.888	7.756		6.228
10/23/2007	8:00	7.847	5.461	2.348	6.8	8.094	8.421				3.069			6.077	5.882	7.749		6.22
10/23/2007	12:00	7.833	5.465	2.352	6.796	8.074	8.406				3.065			6.072	5.882	7.743		6.212
10/23/2007	16:00	7.817	5.464	2.354	6.779	8.043	8.379				3.055			6.069	5.875	7.729		6.195
10/23/2007	20:00	7.805	5.467	2.36	6.769	8.016	8.364				3.057			6.069	5.877	7.714		6.185
10/24/2007	0:00	7.798	5.475	2.369	6.773	8.029	8.36				3.061			6.069	5.881	7.712		6.187
10/24/2007	4:00	7.794	5.484	2.385	6.775	8.04	8.358				3.065			6.074	5.882	7.712		6.185
10/24/2007	8:00	7.786	5.5	2.403	6.777	8.045	8.354				3.067			6.083	5.888	7.716		6.181
10/24/2007	12:00	7.79	5.515	2.426	6.777	8.029	8.343				3.069			6.092	5.896	7.726		6.158
10/24/2007	16:00	7.772	5.528	2.44	6.761	8.001	8.322				3.065			6.095	5.901	7.722		6.1
10/24/2007	20:00	7.77	5.537	2.457	6.745	7.976	8.301				3.063			6.099	5.909	7.716		6.09
10/25/2007	0:00	7.764	5.548	2.475	6.755	8.005	8.312				3.069			6.107	5.915	7.72		6.127
10/25/2007	4:00	7.755	5.556	2.487	6.759	8.014	8.312				3.071			6.111	5.917	7.716		6.139
10/25/2007	8:00	7.749	5.564	2.5	6.765	8.017	8.309				3.071			6.12	5.922	7.714		6.15
10/25/2007	12:00	7.749	5.575	2.51	6.763	7.987	8.309				3.075			6.123	5.924	7.716		6.117
10/25/2007	16:00	7.694	5.577	2.516	6.747	7.942	8.272				3.069			6.123	5.926	7.71		6.108
10/25/2007	20:00	7.729	5.583	2.522	6.745	7.932	8.253				3.071			6.127	5.928	7.704		6.106
10/26/2007	0:00	7.727	5.591	2.534	6.757	7.96	8.261				3.081			6.134	5.932	7.704		6.131
10/26/2007	4:00	7.721	5.595	2.541	6.761	7.971	8.267				3.085			6.136	5.932	7.701		6.141
10/26/2007	8:00	7.719	5.6	2.547	6.765	7.979	8.269				3.089			6.143	5.934	7.699		6.152
10/26/2007	12:00	7.725	5.612	2.561	6.777	7.952	8.246				3.1			6.151	5.94	7.706		6.162
10/26/2007	16:00	7.719	5.62	2.573	6.784	7.921	8.223				3.104			6.162	5.941	7.708		6.174
10/26/2007	20:00	7.725	5.631	2.59	6.792	7.91	8.207				3.112			6.172	5.949	7.714		6.174
10/27/2007	0:00	7.733	5.649	2.612	6.804	7.957	8.229				3.126			6.188	5.959	7.729		6.191
10/27/2007	4:00	7.737	5.662	2.635	6.819	7.989	8.246				3.136			6.202	5.966	7.737		6.202
10/27/2007	8:00	7.743	5.678	2.653	6.831	8.005	8.259				3.148			6.216	5.976	7.749		6.21
10/27/2007	12:00	7.755	5.703	2.684	6.845	7.995	8.253				3.161			6.234	5.995	7.768		6.222
10/27/2007	16:00	7.758	5.722	2.711	6.858	7.952	8.217				3.169			6.252	6.008	7.785		6.224
10/27/2007	20:00	7.776	5.739	2.735	6.868	7.974	8.221				3.181			6.273	6.025	7.799		6.24
10/28/2007	0:00	7.786	5.763	2.766	6.886	8.027	8.257				3.197			6.296	6.044	7.816		6.257
10/28/2007	4:00	7.796	5.782	2.792	6.907	8.061	8.284				3.215			6.317	6.062	7.831		6.274
10/28/2007	8:00	7.807	5.799	2.813	6.919	8.083	8.303				3.226			6.331	6.073	7.843		6.288
10/28/2007	12:00	7.817	5.821	2.837	6.936	8.107	8.324				3.24			6.35	6.092	7.86		6.307
10/28/2007	16:00	7.809	5.836	2.854	6.95	7.986	8.251				3.252			6.364	6.102	7.868		6.325
10/28/2007	20:00	7.831	5.846	2.872	6.954	7.992	8.24				3.264			6.38	6.113	7.876		6.328
10/29/2007	0:00	7.839	5.859	2.885	6.971	8.045	8.278				3.276			6.396	6.124	7.887		6.342
10/29/2007	4:00	7.845	5.871	2.899	6.983	8.078	8.305				3.293			6.41	6.134	7.895		6.356
10/29/2007	8:00	7.845	5.879	2.907	6.991	8.098	8.328				3.301			6.415	6.123	7.899		6.361
10/29/2007	12:00	7.851	5.886	2.903	6.999	8.033	8.293				3.319			6.417	6.227	7.912		6.377
10/29/2007	16:00	7.845	5.892	2.842	6.993	8.048	8.295				3.321			6.392	6.151	7.916		6.342
10/29/2007	20:00	7.854	5.892	2.811	6.985	8.048	8.297				3.325			6.352	6.157	7.916		6.336
10/30/2007	0:00	7.858	5.894	2.852	6.997	8.083	8.319				3.331			6.375	6.161	7.92		6.35

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
10/30/2007	4:00	7.86	5.898	2.876	7.001	8.102	8.339				3.339			6.399	6.166	7.926		6.361
10/30/2007	8:00	7.862	5.898	2.889	7.01	8.114	8.351				3.344			6.38	6.17	7.928		6.369
10/30/2007	12:00	7.86	5.9	2.878	7.006	8.109	8.351				3.344			6.391	6.168	7.935		6.34
10/30/2007	16:00	7.847	5.902	2.876	6.997	8.139	8.379				3.344			6.382	6.17	7.939		6.328
10/30/2007	20:00	7.87	5.898	2.864	6.999	8.176	8.412				3.346			6.366	6.172	7.945		6.346
10/31/2007	0:00	7.876	5.9	2.876	7.01	8.183	8.423				3.352			6.387	6.176	7.949		6.361
10/31/2007	4:00	7.888	5.906	2.891	7.018	8.189	8.429				3.364			6.405	6.182	7.96		6.375
10/31/2007	8:00	7.894	5.917	2.907	7.036	8.202	8.437				3.376			6.419	6.187	7.974		6.392
10/31/2007	12:00	7.913	5.935	2.913	7.057	8.223	8.454				3.388			6.373	6.203	7.995		6.406
10/31/2007	16:00	7.923	5.952	2.926	7.067	8.245	8.467				3.394			6.399	6.216	8.007		6.416
10/31/2007	20:00	7.945	5.971	2.952	7.082	8.264	8.479				3.407			6.411	6.231	8.024		6.427
11/1/2007	0:00	7.958	5.991	2.985	7.102	8.285	8.494				3.417			6.454	6.246	8.041		6.441
11/1/2007	4:00	7.97	6.01	3.016	7.119	8.302	8.509				3.433			6.485	6.264	8.06		6.46
11/1/2007	8:00	7.98	6.026	3.042	7.135	8.314	8.524				3.449			6.512	6.277	8.078		6.477
11/1/2007	12:00	7.995	6.043	3.061	7.149	8.319	8.529				3.459			6.508	6.292	8.093		6.491
11/1/2007	16:00	7.99	6.055	3.071	7.158	8.311	8.534				3.465			6.51	6.3	8.105		6.499
11/1/2007	20:00	8.013	6.062	3.081	7.168	8.313	8.536				3.476			6.522	6.309	8.114		6.508
11/2/2007	0:00	8.019	6.072	3.095	7.18	8.334	8.551				3.49			6.548	6.317	8.126		6.52
11/2/2007	4:00	8.029	6.082	3.112	7.191	8.348	8.565				3.506			6.57	6.326	8.134		6.532
11/2/2007	8:00	8.037	6.091	3.126	7.203	8.362	8.578				3.52			6.595	6.336	8.145		6.547
11/2/2007	12:00	8.046	6.105	3.134	7.219	8.364	8.591				3.53			6.572	6.347	8.159		6.557
11/2/2007	16:00	8.05	6.118	3.145	7.23	8.372	8.61				3.537			6.57	6.358	8.172		6.565
11/2/2007	20:00	8.068	6.134	3.165	7.244	8.399	8.622				3.555			6.608	6.368	8.189		6.58
11/3/2007	0:00	8.082	6.151	3.19	7.26	8.422	8.639				3.573			6.635	6.382	8.205		6.596
11/3/2007	4:00	8.095	6.168	3.214	7.275	8.441	8.652				3.587			6.659	6.397	8.222		6.613
11/3/2007	8:00	8.107	6.186	3.239	7.293	8.459	8.666				3.606			6.682	6.412	8.239		6.629
11/3/2007	12:00	8.113	6.201	3.255	7.308	8.465	8.672				3.616			6.696	6.424	8.251		6.644
11/3/2007	16:00	8.117	6.209	3.267	7.314	8.463	8.676				3.626			6.719	6.433	8.255		6.654
11/3/2007	20:00	8.136	6.217	3.284	7.324	8.47	8.687				3.64			6.731	6.441	8.264		6.671
11/4/2007	0:00	8.144	6.224	3.294	7.334	8.482	8.7				3.656			6.747	6.45	8.272		6.685
11/4/2007	4:00	8.154	6.234	3.302	7.345	8.494	8.713				3.669			6.756	6.456	8.282		6.693
11/4/2007	8:00	8.164	6.244	3.317	7.357	8.507	8.725				3.685			6.767	6.464	8.293		6.704
11/4/2007	12:00	8.172	6.251	3.325	7.371	8.512	8.734				3.697			6.777	6.471	8.303		6.716
11/4/2007	16:00	8.172	6.255	3.329	7.376	8.512	8.737				3.701			6.781	6.475	8.305		6.722
11/4/2007	20:00	8.18	6.258	3.333	7.38	8.516	8.748				3.713			6.79	6.479	8.307		6.735
11/5/2007	0:00	8.187	6.257	3.333	7.386	8.518	8.752				3.723			6.793	6.483	8.309		6.741
11/5/2007	4:00	8.191	6.257	3.331	7.388	8.523	8.758				3.73			6.798	6.48	8.311		6.745
11/5/2007	8:00	8.205	6.267	3.343	7.4	8.54	8.775				3.744			6.804	6.492	8.33		6.756
11/5/2007	12:00	8.23	6.29	3.366	7.427	8.571	8.79				3.766			6.816	6.507	8.359		6.772
11/5/2007	16:00	8.23	6.31	3.39	7.437	8.572	8.79				3.766			6.835	6.521	8.38		6.782
11/5/2007	20:00	8.254	6.333	3.419	7.458	8.59	8.803				3.791			6.862	6.403	8.403		6.803
11/6/2007	0:00	8.268	6.358	3.452	7.476	8.624	8.824				3.809			6.886	6.561	8.428		6.82
11/6/2007	4:00	8.285	6.379	3.48	7.497	8.651	8.842				3.823			6.907	6.532	8.445		6.836
11/6/2007	8:00	8.303	6.402	3.513	7.517	8.675	8.865				3.835			6.93	6.481	8.463		6.853
11/6/2007	12:00	8.324	6.43	3.542	7.536	8.694	8.895				3.856			6.949	6.597	8.495		6.871
11/6/2007	16:00	8.33	6.449	3.564	7.55	8.712	8.907				3.868			6.969	6.709	8.515		6.886
11/6/2007	20:00	8.35	6.468	3.589	7.569	8.728	8.928				3.888			6.99	6.671	8.534		6.904
11/7/2007	0:00	8.368	6.485	3.609	7.587	8.751	8.947				3.906			7.013	6.624	8.551		6.921
11/7/2007	4:00	8.381	6.497	3.626	7.6	8.763	8.96				3.923			7.027	6.631	8.557		6.933

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
11/7/2007	8:00	8.387	6.509	3.64	7.612	8.775	8.974				3.931			7.039	6.643	8.57		6.946
11/7/2007	12:00	8.409	6.516	3.65	7.624	8.775	8.985				3.945			7.051	6.698	8.582		6.96
11/7/2007	16:00	8.397	6.514	3.65	7.626	8.746	8.981				3.951			7.059	6.702	8.574		6.968
11/7/2007	20:00	8.399	6.516	3.654	7.635	8.741	8.99				3.961			7.071	6.703	8.572		6.979
11/8/2007	0:00	8.405	6.518	3.656	7.643	8.755	8.995				3.982			7.076	6.706	8.578		6.991
11/8/2007	4:00	8.413	6.516	3.654	7.647	8.763	9.004				3.988			7.078	6.706	8.582		6.995
11/8/2007	8:00	8.42	6.52	3.654	7.651	8.776	9.012				3.998			7.081	6.706	8.588		7.002
11/8/2007	12:00	8.432	6.528	3.661	7.665	8.787	9.021				4.014			7.087	6.713	8.603		7.014
11/8/2007	16:00	8.432	6.53	3.667	7.67	8.791	9.023				4.016			7.098	6.717	8.605		7.022
11/8/2007	20:00	8.45	6.537	3.679	7.678	8.789	9.029				4.024			7.108	6.722	8.609		7.033
11/9/2007	0:00	8.458	6.547	3.687	7.69	8.81	9.042				4.036			7.115	6.729	8.622		7.041
11/9/2007	4:00	8.462	6.551	3.695	7.696	8.823	9.05				4.043			7.122	6.681	8.63		7.047
11/9/2007	8:00	8.475	6.562	3.708	7.707	8.839	9.063				4.055			7.131	6.647	8.642		7.055
11/9/2007	12:00	8.487	6.578	3.728	7.723	8.856	9.079				4.071			7.145	6.721	8.661		7.07
11/9/2007	16:00	8.487	6.591	3.71	7.725	8.864	9.086				4.075			7.145	6.806	8.67		7.049
11/9/2007	20:00	8.503	6.605	3.765	7.725	8.879	9.097				4.079			7.168	6.769	8.682		7.043
11/10/2007	0:00	8.514	6.619	3.779	7.739	8.896	9.113				4.085			7.175	6.721	8.697		7.068
11/10/2007	4:00	8.524	6.628	3.79	7.748	8.909	9.124				4.103			7.189	6.711	8.705		7.08
11/10/2007	8:00	8.53	6.636	3.8	7.758	8.917	9.134				4.11			7.197	6.704	8.713		7.093
11/10/2007	12:00	8.54	6.644	3.812	7.77	8.917	9.14				4.116			7.208	6.875	8.722		7.105
11/10/2007	16:00	8.536	6.646	3.81	7.766	8.914	9.145				4.128			7.215	6.814	8.721		7.097
11/10/2007	20:00	8.546	6.646	3.814	7.768	8.919	9.153				4.136			7.224	6.818	8.723		7.111
11/11/2007	0:00	8.554	6.649	3.82	7.781	8.932	9.163				4.15			7.229	6.822	8.73		7.126
11/11/2007	4:00	8.563	6.649	3.822	7.787	8.937	9.172				4.154			7.231	6.822	8.736		7.136
11/11/2007	8:00	8.569	6.651	3.822	7.793	8.941	9.178				4.158			7.233	6.822	8.74		7.142
11/11/2007	12:00	8.579	6.657	3.826	7.803	8.954	9.187				4.168			7.238	6.827	8.751		7.157
11/11/2007	16:00	8.585	6.659	3.831	7.811	8.959	9.193				4.175			7.245	6.831	8.757		7.163
11/11/2007	20:00	8.599	6.667	3.839	7.822	8.972	9.205				4.185			7.25	6.839	8.767		7.175
11/12/2007	0:00	8.614	6.68	3.851	7.836	8.994	9.218				4.197			7.263	6.847	8.782		7.188
11/12/2007	4:00	8.626	6.692	3.867	7.85	9.014	9.233				4.205			7.266	6.858	8.798		7.198
11/12/2007	8:00	8.64	6.709	3.887	7.865	9.03	9.247				4.217			7.284	6.87	8.815		7.211
11/12/2007	12:00	8.659	6.729	3.914	7.883	9.06	9.27				4.223			7.301	6.886	8.84		7.223
11/12/2007	16:00	8.675	6.75	3.943	7.898	9.078	9.285				4.231			7.322	6.902	8.857		7.235
11/12/2007	20:00	8.691	6.767	3.969	7.912	9.097	9.3				4.252			7.349	6.917	8.869		7.252
11/13/2007	0:00	8.706	6.789	3.992	7.929	9.115	9.317				4.27			7.365	6.932	8.888		7.266
11/13/2007	4:00	8.714	6.8	4.008	7.939	9.122	9.329				4.282			7.38	6.944	8.894		7.279
11/13/2007	8:00	8.722	6.808	4.021	7.945	9.127	9.338				4.292			7.393	6.953	8.902		7.289
11/13/2007	12:00	8.732	6.814	4.027	7.955	9.15	9.359				4.297			7.401	6.959	8.911		7.299
11/13/2007	16:00	8.736	6.81	4.027	7.957	9.147	9.363				4.309			7.407	6.961	8.907		7.308
11/13/2007	20:00	8.744	6.812	4.025	7.959	9.139	9.365				4.325			7.414	6.963	8.904		7.299
11/14/2007	0:00	8.755	6.814	4.027	7.966	9.148	9.38				4.335			7.416	6.965	8.915		7.314
11/14/2007	4:00	8.763	6.823	4.031	7.978	9.166	9.39				4.347			7.421	6.972	8.932		7.328
11/14/2007	8:00	8.779	6.833	4.043	7.992	9.184	9.403				4.357			7.43	6.982	8.948		7.341
11/14/2007	12:00	8.791	6.85	4.066	8.011	9.206	9.417				4.368			7.44	6.995	8.971		7.353
11/14/2007	16:00	8.798	6.866	4.088	8.019	9.212	9.428				4.37			7.456	7.007	8.979		7.353
11/14/2007	20:00	8.81	6.885	4.109	8.023	9.225	9.443				4.386			7.475	7.022	8.996		7.349
11/15/2007	0:00	8.826	6.907	4.135	8.044	9.254	9.462				4.404			7.495	7.041	9.019		7.372
11/15/2007	4:00	8.84	6.93	4.162	8.06	9.275	9.48				4.42			7.514	7.058	9.038		7.394
11/15/2007	8:00	8.855	6.947	4.182	8.077	9.291	9.493				4.433			7.528	7.071	9.054		7.411

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
11/15/2007	12:00	8.869	6.966	4.205	8.095	9.309	9.516				4.445			7.544	7.182	9.078		7.429
11/15/2007	16:00	8.873	6.978	4.221	8.099	9.308	9.518				4.455			7.56	7.1	9.083		7.415
11/15/2007	20:00	8.881	6.988	4.234	8.099	9.31	9.529				4.465			7.574	7.11	9.088		7.407
11/16/2007	0:00	8.883	6.995	4.244	8.107	9.318	9.539				4.475			7.583	7.119	9.096		7.43
11/16/2007	4:00	8.889	6.997	4.244	8.118	9.32	9.546				4.483			7.586	7.121	9.098		7.446
11/16/2007	8:00	8.894	6.992	4.238	8.12	9.318	9.552				4.492			7.588	7.123	9.096		7.455
11/16/2007	12:00	8.898	6.986	4.229	8.124	9.32	9.56				4.498			7.588	7.119	9.098		7.457
11/16/2007	16:00	8.898	6.98	4.219	8.124	9.313	9.56				4.5			7.586	7.222	9.1		7.45
11/16/2007	20:00	8.91	6.982	4.219	8.13	9.321	9.564				4.502			7.591	7.131	9.102		7.467
11/17/2007	0:00	8.918	6.98	4.219	8.14	9.333	9.571				4.514			7.593	7.081	9.111		7.481
11/17/2007	4:00	8.926	6.982	4.221	8.146	9.344	9.581				4.52			7.597	7.024	9.119		7.49
11/17/2007	8:00	8.934	6.986	4.223	8.157	9.353	9.59				4.53			7.602	7.037	9.131		7.5
11/17/2007	12:00	8.943	6.993	4.231	8.167	9.37	9.604				4.532			7.607	7.102	9.144		7.514
11/17/2007	16:00	8.953	7.003	4.242	8.177	9.377	9.594				4.544			7.618	7.212	9.152		7.523
11/17/2007	20:00	8.973	7.013	4.258	8.19	9.392	9.621				4.557			7.637	7.14	9.165		7.539
11/18/2007	0:00	8.983	7.024	4.274	8.202	9.408	9.632				4.567			7.644	7.089	9.177		7.55
11/18/2007	4:00	8.998	7.038	4.293	8.214	9.421	9.642				4.577			7.656	7.093	9.19		7.562
11/18/2007	8:00	9.01	7.05	4.307	8.227	9.437	9.657				4.589			7.671	7.106	9.202		7.572
11/18/2007	12:00	9.02	7.063	4.324	8.239	9.446	9.665				4.599			7.681	7.147	9.215		7.583
11/18/2007	16:00	9.024	7.073	4.334	8.245	9.448	9.674				4.609			7.69	7.194	9.219		7.591
11/18/2007	20:00	9.039	7.082	4.348	8.257	9.463	9.686				4.622			7.704	7.205	9.231		7.607
11/19/2007	0:00	9.049	7.09	4.358	8.266	9.474	9.697				4.634			7.713	7.21	9.24		7.618
11/19/2007	4:00	9.057	7.098	4.364	8.274	9.48	9.705				4.64			7.72	7.218	9.248		7.624
11/19/2007	8:00	9.067	7.106	4.373	8.284	9.488	9.713				4.646			7.73	7.226	9.256		7.632
11/19/2007	12:00	9.069	7.111	4.379	8.294	9.504	9.73				4.644			7.734	7.232	9.267		7.641
11/19/2007	16:00	9.084	7.115	4.383	8.301	9.515	9.737				4.658			7.741	7.237	9.271		7.647
11/19/2007	20:00	9.098	7.123	4.393	8.307	9.523	9.749				4.666			7.75	7.241	9.275		7.661
11/20/2007	0:00	9.104	7.127	4.397	8.319	9.53	9.755				4.678			7.758	7.247	9.285		7.668
11/20/2007	4:00	9.106	7.127	4.399	8.323	9.53	9.76				4.685			7.762	7.247	9.288		7.674
11/20/2007	8:00	9.114	7.131	4.405	8.327	9.535	9.766				4.691			7.767	7.251	9.294		7.68
11/20/2007	12:00	9.114	7.137	4.41	8.333	9.56	9.774				4.699			7.773	7.256	9.306		7.686
11/20/2007	16:00	9.139	7.142	4.418	8.342	9.568	9.787				4.705			7.778	7.26	9.312		7.696
11/20/2007	20:00	9.161	7.156	4.43	8.356	9.588	9.804				4.719			7.792	7.272	9.327		7.711
11/21/2007	0:00	9.167	7.171	4.448	8.37	9.599	9.816				4.733			7.802	7.283	9.346		7.725
11/21/2007	4:00	9.176	7.183	4.467	8.381	9.612	9.825				4.744			7.817	7.293	9.358		7.73
11/21/2007	8:00	9.188	7.196	4.485	8.391	9.626	9.835				4.754			7.831	7.306	9.371		7.744
11/21/2007	12:00	9.196	7.214	4.506	8.405	9.661	9.865				4.768			7.788	7.321	9.383		7.75
11/21/2007	16:00	9.208	7.22	4.516	8.405	9.674	9.875				4.764			7.707	7.321	9.344		7.678
11/21/2007	20:00	9.227	7.243	4.543	8.422	9.692	9.89				4.774			7.641	7.342	9.415		7.668
11/22/2007	0:00	9.239	7.266	4.571	8.441	9.708	9.904				4.796			7.751	7.357	9.433		7.746
11/22/2007	4:00	9.249	7.283	4.594	8.453	9.722	9.915				4.813			7.911	7.373	9.452		7.779
11/22/2007	8:00	9.263	7.305	4.62	8.471	9.738	9.93				4.825			7.933	7.392	9.467		7.812
11/22/2007	12:00	9.296	7.33	4.647	8.492	9.754	9.946				4.843			7.991	7.409	9.496		7.824
11/22/2007	16:00	9.296	7.347	4.667	8.506	9.767	9.959				4.859			7.966	7.424	9.502		7.839
11/22/2007	20:00	9.312	7.367	4.692	8.52	9.785	9.978				4.869			7.991	7.445	9.523		7.864
11/23/2007	0:00	9.327	7.384	4.715	8.541	9.804	9.993				4.892			8.012	7.46	9.539		7.885
11/23/2007	4:00	9.335	7.398	4.729	8.551	9.814	10.003				4.904			8.026	7.47	9.55		7.895
11/23/2007	8:00	9.341	7.408	4.739	8.562	9.822	10.016				4.914			8.038	7.481	9.558		7.903
11/23/2007	12:00	9.372	7.419	4.753	8.576	9.827	10.028				4.93			8.049	7.497	9.577		7.92

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
11/23/2007	16:00	9.366	7.423	4.756	8.582	9.828	10.037				4.937			8.057	7.498	9.575		7.93
11/23/2007	20:00	9.374	7.429	4.762	8.592	9.835	10.047				4.955			8.064	7.506	9.581		7.94
11/24/2007	0:00	9.386	7.435	4.766	8.607	9.846	10.06				4.965			8.073	7.514	9.596		7.951
11/24/2007	4:00	9.394	7.437	4.768	8.609	9.852	10.064				4.971			8.079	7.518	9.602		7.959
11/24/2007	8:00	9.396	7.435	4.768	8.613	9.852	10.066				4.975			8.068	7.516	9.596		7.957
11/24/2007	12:00	9.41	7.44	4.77	8.62	9.86	10.077				4.989			8.087	7.519	9.616		8.044
11/24/2007	16:00	9.41	7.44	4.772	8.625	9.863	10.081				4.987			8.089	7.521	9.619		7.98
11/24/2007	20:00	9.417	7.442	4.776	8.634	9.873	10.091				4.995			8.098	7.527	9.625		7.988
11/25/2007	0:00	9.425	7.448	4.78	8.642	9.881	10.1				5.004			8.107	7.533	9.633		7.996
11/25/2007	4:00	9.429	7.446	4.78	8.644	9.884	10.104				5.01			8.107	7.533	9.635		8.002
11/25/2007	8:00	9.431	7.442	4.78	8.644	9.883	10.104				5.012			8.105	7.533	9.637		8
11/25/2007	12:00	9.447	7.446	4.782	8.65	9.887	10.108				5.018			8.108	7.535	9.648		8.007
11/25/2007	16:00	9.437	7.444	4.776	8.654	9.883	10.112				5.02			8.108	7.535	9.646		8.013
11/25/2007	20:00	9.44	7.44	4.774	8.656	9.889	10.117				5.026			8.11	7.535	9.641		8.017
11/26/2007	0:00	9.451	7.442	4.776	8.665	9.897	10.125				5.034			8.114	7.535	9.656		8.023
11/26/2007	4:00	9.457	7.442	4.778	8.669	9.902	10.129				5.038			8.117	7.538	9.66		8.03
11/26/2007	8:00	9.462	7.446	4.78	8.671	9.91	10.133				5.038			8.119	7.538	9.668		8.03
11/26/2007	12:00	9.48	7.458	4.79	8.683	9.931	10.15				5.046			8.124	7.548	9.691		8.04
11/26/2007	16:00	9.486	7.468	4.805	8.693	9.956	10.159				5.054			8.135	7.556	9.704		8.048
11/26/2007	20:00	9.509	7.481	4.823	8.705	9.977	10.169				5.069			8.147	7.567	9.721		8.061
11/27/2007	0:00	9.525	7.498	4.844	8.72	9.993	10.182				5.081			8.165	7.579	9.737		8.073
11/27/2007	4:00	9.537	7.512	4.862	8.732	10.004	10.194				5.089			8.179	7.59	9.752		8.083
11/27/2007	8:00	9.545	7.522	4.876	8.74	10.013	10.203				5.095			8.188	7.601	9.76		8.089
11/27/2007	12:00	9.558	7.535	4.895	8.751	10.037	10.215				5.101			8.198	7.613	9.775		8.1
11/27/2007	16:00	9.558	7.539	4.905	8.757	10.033	10.217				5.103			8.212	7.619	9.773		8.104
11/27/2007	20:00	9.564	7.541	4.905	8.757	10.027	10.228				5.115			8.212	7.62	9.764		8.112
11/28/2007	0:00	9.57	7.541	4.903	8.763	10.027	10.234				5.121			8.219	7.622	9.764		8.118
11/28/2007	4:00	9.568	7.539	4.901	8.765	10.022	10.232				5.117			8.217	7.624	9.764		8.11
11/28/2007	8:00	9.566	7.537	4.893	8.765	10.021	10.236				5.121			8.212	7.622	9.766		8.116
11/28/2007	12:00	9.578	7.543	4.897	8.777	10.032	10.249				5.132			8.216	7.626	9.785		8.137
11/28/2007	16:00	9.58	7.551	4.905	8.786	10.046	10.251				5.144			8.23	7.634	9.798		8.147
11/28/2007	20:00	9.596	7.566	4.919	8.798	10.069	10.263				5.156			8.242	7.645	9.808		8.156
11/29/2007	0:00	9.613	7.582	4.942	8.812	10.089	10.278				5.168			8.258	7.657	9.825		8.168
11/29/2007	4:00	9.623	7.599	4.962	8.825	10.104	10.289				5.176			8.272	7.668	9.841		8.176
11/29/2007	8:00	9.632	7.611	4.979	8.833	10.112	10.299				5.184			8.283	7.68	9.845		8.182
11/29/2007	12:00	9.646	7.62	4.993	8.842	10.134	10.31				5.186			8.295	7.693	9.862		8.189
11/29/2007	16:00	9.648	7.63	5.003	8.849	10.128	10.314				5.195			8.302	7.7	9.864		8.197
11/29/2007	20:00	9.654	7.636	5.009	8.853	10.131	10.324				5.213			8.309	7.702	9.864		8.207
11/30/2007	0:00	9.664	7.641	5.016	8.862	10.139	10.333				5.219			8.318	7.71	9.873		8.215
11/30/2007	4:00	9.677	7.653	5.028	8.874	10.155	10.347				5.237			8.33	7.721	9.887		8.23
11/30/2007	8:00	9.691	7.668	5.042	8.891	10.174	10.362				5.245			8.341	7.733	9.908		8.242
11/30/2007	12:00	9.707	7.684	5.061	8.905	10.194	10.377				5.266			8.351	7.746	9.929		8.257
11/30/2007	16:00	9.724	7.698	5.077	8.911	10.223	10.377				5.274			8.365	7.758	9.933		8.265
11/30/2007	20:00	9.732	7.709	5.089	8.922	10.226	10.394				5.286			8.383	7.769	9.939		8.278
12/1/2007	0:00	9.742	7.713	5.097	8.927	10.222	10.402				5.292			8.392	7.773	9.945		8.282
12/1/2007	4:00	9.742	7.714	5.102	8.929	10.216	10.404				5.294			8.393	7.779	9.945		8.288
12/1/2007	8:00	9.722	7.685	5.075	8.911	10.182	10.383				5.284			8.573	7.756	10.012		8.336
12/1/2007	12:00	9.707	7.658	5.042	8.885	10.141	10.356				5.278			8.566	7.729	10.397		8.356
12/1/2007	16:00	9.67	7.606	5.011	8.855	10.091	10.337				5.258			8.539	7.685	10.087		8.418

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
12/1/2007	20:00	9.659	7.571	4.956	8.842	10.073	10.333				5.243			8.492	7.676	10.062		8.284
12/2/2007	0:00	9.648	7.541	4.897	8.829	10.064	10.326				5.217			8.378	7.653	9.816		8.181
12/2/2007	4:00	9.64	7.512	4.85	8.814	10.061	10.314				5.199			8.23	7.638	9.835		8.199
12/2/2007	8:00	9.636	7.484	4.813	8.806	10.061	10.31				5.178			8.205	7.624	9.833		8.185
12/2/2007	12:00	9.64	7.469	4.794	8.8	10.069	10.303				5.162			8.184	7.617	9.839		8.175
12/2/2007	16:00	9.638	7.459	4.786	8.8	10.075	10.303				5.142			8.174	7.615	9.841		8.164
12/2/2007	20:00	9.636	7.455	4.786	8.804	10.088	10.301				5.13			8.17	7.615	9.85		8.162
12/3/2007	0:00	9.64	7.455	4.79	8.802	10.096	10.297				5.115			8.168	7.613	9.854		8.152
12/3/2007	4:00	9.636	7.45	4.794	8.8	10.093	10.291				5.099			8.161	7.611	9.848		8.146
12/3/2007	8:00	9.636	7.448	4.796	8.796	10.093	10.287				5.089			8.159	7.617	9.85		8.141
12/3/2007	12:00	9.636	7.446	4.79	8.796	10.094	10.287				5.077			8.158	7.613	9.848		8.135
12/3/2007	16:00	9.621	7.433	4.786	8.786	10.075	10.278				5.058			8.147	7.605	9.829		8.127
12/3/2007	20:00	9.617	7.421	4.774	8.777	10.07	10.278				5.052			8.14	7.596	9.81		8.123
12/4/2007	0:00	9.613	7.408	4.76	8.773	10.054	10.268				5.044			8.13	7.586	9.8		8.117
12/4/2007	4:00	9.603	7.39	4.743	8.761	10.033	10.249				5.032			8.115	7.573	9.785		8.105
12/4/2007	8:00	9.593	7.377	4.725	8.753	10.017	10.238				5.022			8.105	7.559	9.773		8.098
12/4/2007	12:00	9.595	7.361	4.708	8.747	10.03	10.219				5.012			8.091	7.546	9.766		8.088
12/4/2007	16:00	9.577	7.34	4.688	8.732	10.009	10.215				4.993			8.073	7.531	9.741		8.078
12/4/2007	20:00	9.571	7.322	4.674	8.722	9.993	10.207				4.983			8.064	7.514	9.725		8.065
12/5/2007	0:00	9.56	7.307	4.653	8.712	9.976	10.194				4.977			8.05	7.5	9.712		8.057
12/5/2007	4:00	9.556	7.293	4.639	8.705	9.968	10.184				4.971			8.036	7.489	9.704		8.051
12/5/2007	8:00	9.554	7.297	4.643	8.71	9.974	10.184				4.975			8.033	7.485	9.712		8.051
12/5/2007	12:00	9.566	7.305	4.655	8.718	10.001	10.192				4.977			8.038	7.489	9.727		8.053
12/5/2007	16:00	9.566	7.312	4.667	8.716	10.014	10.182				4.973			8.043	7.489	9.723		8.049
12/5/2007	20:00	9.575	7.321	4.686	8.72	10.024	10.177				4.975			8.054	7.495	9.725		8.053
12/6/2007	0:00	9.579	7.328	4.7	8.718	10.017	10.18				4.975			8.059	7.498	9.725		8.051
12/6/2007	4:00	9.566	7.33	4.704	8.714	10.003	10.171				4.971			8.059	7.493	9.721		8.049
12/6/2007	8:00	9.568	7.33	4.706	8.714	9.993	10.169				4.971			8.059	7.497	9.721		8.047
12/6/2007	12:00	9.544	7.319	4.696	8.695	9.987	10.161				4.957			8.049	7.479	9.698		8.032
12/6/2007	16:00	9.529	7.303	4.684	8.683	9.96	10.146				4.943			8.035	7.466	9.683		8.032
12/6/2007	20:00	9.532	7.303	4.682	8.683	9.956	10.144				4.945			8.036	7.462	9.654		8.012
12/7/2007	0:00	9.532	7.307	4.686	8.687	9.96	10.144				4.951			8.04	7.466	9.623		8.016
12/7/2007	4:00	9.53	7.309	4.69	8.691	9.958	10.138				4.951			8.042	7.462	9.598		8.022
12/7/2007	8:00	9.534	7.314	4.698	8.692	9.961	10.14				4.953			8.045	7.468	9.585		8.02
12/7/2007	12:00	9.536	7.324	4.708	8.698	9.969	10.146				4.957			8.066	7.472	9.577		8.027
12/7/2007	16:00	9.536	7.326	4.717	8.695	9.966	10.144				4.963			8.056	7.472	9.619		8.045
12/7/2007	20:00	9.542	7.336	4.729	8.702	9.974	10.15				4.965			8.064	7.479	9.571		8.029
12/8/2007	0:00	9.548	7.349	4.747	8.712	9.985	10.156				4.965			8.077	7.489	9.71		8.033
12/8/2007	4:00	9.548	7.353	4.756	8.712	9.985	10.154				4.976			8.066	7.487	9.714		8.049
12/8/2007	8:00	9.552	7.363	4.77	8.718	9.99	10.156				4.977			8.056	7.495	9.721		8.047
12/8/2007	12:00	9.561	7.381	4.788	8.728	10.003	10.167				4.989			8.1	7.506	9.733		8.062
12/8/2007	16:00	9.558	7.386	4.801	8.735	10	10.171				5			8.107	7.51	9.737		8.08
12/8/2007	20:00	9.567	7.396	4.813	8.739	10.013	10.175				5.006			8.123	7.518	9.743		8.068
12/9/2007	0:00	9.575	7.411	4.829	8.749	10.022	10.184				5.016			8.135	7.527	9.754		8.089
12/9/2007	4:00	9.577	7.419	4.841	8.755	10.025	10.186				5.024			8.142	7.531	9.756		8.095
12/9/2007	8:00	9.583	7.428	4.852	8.763	10.032	10.192				5.028			8.152	7.538	9.764		8.099
12/9/2007	12:00	9.593	7.44	4.864	8.769	10.038	10.198				5.039			8.159	7.546	9.771		8.103
12/9/2007	16:00	9.595	7.446	4.87	8.779	10.042	10.203				5.045			8.17	7.552	9.777		8.114
12/9/2007	20:00	9.599	7.454	4.882	8.779	10.049	10.211				5.059			8.179	7.561	9.781		8.122

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
12/10/2007	0:00	9.61	7.468	4.895	8.794	10.061	10.219				5.071			8.189	7.567	9.793		8.134
12/10/2007	4:00	9.614	7.473	4.901	8.796	10.062	10.226				5.075			8.198	7.573	9.795		8.138
12/10/2007	8:00	9.616	7.475	4.907	8.8	10.065	10.23				5.077			8.203	7.575	9.795		8.143
12/10/2007	12:00	9.626	7.485	4.911	8.814	10.094	10.242				5.087			8.212	7.58	9.808		8.149
12/10/2007	16:00	9.624	7.484	4.915	8.819	10.086	10.24				5.091			8.21	7.584	9.806		8.157
12/10/2007	20:00	9.634	7.484	4.917	8.817	10.083	10.245				5.098			8.217	7.582	9.806		8.157
12/11/2007	0:00	9.593	7.437	4.884	8.78	10.04	10.2				5.091			8.195	7.552	9.831		8.136
12/11/2007	4:00	9.528	7.371	4.762	8.739	9.963	10.123				5.11			8.133	7.761	9.698		8.07
12/11/2007	8:00	9.487	7.262	4.581	8.695	9.899	10.102				5.114			8.061	7.639	9.648		8.046
12/11/2007	12:00	9.432	7.117	4.389	8.638	9.844	10.068				5.089			7.989	7.58	9.696		8.031
12/11/2007	16:00	9.422	6.979	4.205	8.574	9.782	10.026				5.075			7.929	7.525	9.721		7.988
12/11/2007	20:00	9.399	6.843	4.006	8.502	9.713	9.976				5.039			7.739	7.432	9.612		7.889
12/12/2007	0:00	9.364	6.715	3.818	8.424	9.639	9.913				5.014			7.62	7.001	9.408		7.862
12/12/2007	4:00	9.322	6.594	3.64	8.348	9.564	9.848				4.984			7.502	6.906	9.335		7.8
12/12/2007	8:00	9.266	6.472	3.472	8.268	9.479	9.774				4.976			7.444	6.811	9.254		7.73
12/12/2007	12:00	9.219	6.363	3.318	8.202	9.406	9.705				4.801			7.345	6.82	9.208		7.655
12/12/2007	16:00	9.152	6.254	3.177	8.114	9.32	9.629				4.815			7.241	6.952	9.2		7.583
12/12/2007	20:00	9.093	6.149	3.044	8.033	9.24	9.556				4.805			7.139	6.551	9.038		7.509
12/13/2007	0:00	9.033	6.05	2.927	7.96	9.164	9.485				4.663			7.044	6.471	8.931		7.435
12/13/2007	4:00	8.972	5.957	2.819	7.884	9.094	9.413				4.401			6.953	6.391	8.854		7.358
12/13/2007	8:00	8.915	5.869	2.714	7.814	9.023	9.338				4.073			6.863	6.319	8.777		7.284
12/13/2007	12:00	8.86	5.801	2.632	7.746	8.964	9.275				3.998			6.781	6.25	8.717		7.21
12/13/2007	16:00	8.792	5.737	2.555	7.68	8.904	9.205				3.988			6.703	6.184	8.65		7.146
12/13/2007	20:00	8.733	5.664	2.487	7.619	8.848	9.142				3.956			6.635	6.121	8.584		7.078
12/14/2007	0:00	8.686	5.59	2.417	7.554	8.79	9.084				3.931			6.57	6.058	8.523		7.018
12/14/2007	4:00	8.633	5.528	2.355	7.493	8.736	9.025				3.726			6.505	5.999	8.463		6.956
12/14/2007	8:00	8.576	5.468	2.304	7.431	8.68	8.966				3.659			6.438	5.941	8.401		6.894
12/14/2007	12:00	8.539	5.422	2.251	7.374	8.629	8.911				3.598			6.378	5.892	8.349		6.836
12/14/2007	16:00	8.468	5.376	2.202	7.316	8.571	8.855				3.567			6.322	5.839	8.288		6.778
12/14/2007	20:00	8.412	5.327	2.163	7.259	8.515	8.794				3.555			6.262	5.785	8.224		6.725
12/15/2007	0:00	8.365	5.275	2.118	7.205	8.462	8.739				3.541			6.218	5.738	8.17		6.671
12/15/2007	4:00	8.316	5.229	2.081	7.152	8.412	8.688				3.381			6.169	5.69	8.115		6.619
12/15/2007	8:00	8.269	5.18	2.034	7.092	8.354	8.634				3.323			6.118	5.64	8.055		6.564
12/15/2007	12:00	8.21	5.146	1.993	7.049	8.303	8.573				3.273			6.07	5.633	7.997		6.506
12/15/2007	16:00	8.152	5.105	1.965	6.994	8.25	8.523				3.228			6.019	5.724	7.982		6.454
12/15/2007	20:00	8.109	5.076	1.944	6.94	8.21	8.475				3.19			5.989	5.705	7.947		6.411
12/16/2007	0:00	8.067	5.049	1.924	6.903	8.172	8.427				3.15			5.956	5.684	7.851		6.365
12/16/2007	4:00	8.028	5.028	1.907	6.864	8.135	8.385				3.116			5.929	5.648	7.811		6.329
12/16/2007	8:00	7.989	5.006	1.897	6.829	8.099	8.345				3.084			5.894	5.597	7.774		6.291
12/16/2007	12:00	7.957	4.995	1.879	6.815	8.066	8.301				3.051			5.878	5.551	7.732		6.252
12/16/2007	16:00	7.924	4.977	1.884	6.776	8.032	8.271				3.023			5.873	5.53	7.739		6.223
12/16/2007	20:00	7.873	4.96	1.885	6.743	8.011	8.242				2.999			5.827	5.341	7.674		6.199
12/17/2007	0:00	7.857	4.948	1.876	6.708	7.987	8.204				2.98			5.812	5.316	7.643		6.168
12/17/2007	4:00	7.828	4.937	1.872	6.683	7.958	8.175				2.958			5.794	5.295	7.614		6.143
12/17/2007	8:00	7.799	4.927	1.866	6.661	7.933	8.145				2.94			5.778	5.276	7.585		6.116
12/17/2007	12:00	7.779	4.923	1.856	6.652	7.896	8.114				2.913			5.769	5.257	7.562		6.089
12/17/2007	16:00	7.746	4.908	1.864	6.62	7.872	8.093				2.892			5.754	5.239	7.626		6.071
12/17/2007	20:00	7.72	4.892	1.86	6.595	7.844	8.061				2.877			5.736	5.219	7.657		6.05
12/18/2007	0:00	7.691	4.877	1.854	6.566	7.819	8.032				2.864			5.72	5.198	7.474		6.025

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
12/18/2007	4:00	7.662	4.859	1.841	6.544	7.793	8.002				2.844			5.701	5.175	7.441		6.002
12/18/2007	8:00	7.638	4.846	1.837	6.521	7.771	7.977				2.836			5.688	5.154	7.416		5.982
12/18/2007	12:00	7.624	4.838	1.826	6.506	7.747	7.956				2.822			5.673	5.143	7.403		5.961
12/18/2007	16:00	7.592	4.832	1.828	6.492	7.735	7.933				2.812			5.662	5.126	7.378		5.945
12/18/2007	20:00	7.582	4.825	1.828	6.482	7.74	7.923				2.803			5.659	5.113	7.366		5.93
12/19/2007	0:00	7.568	4.803	1.823	6.463	7.723	7.902				2.791			5.648	5.097	7.354		5.914
12/19/2007	4:00	7.55	4.786	1.819	6.447	7.705	7.883				2.779			5.636	5.078	7.339		5.901
12/19/2007	8:00	7.533	4.772	1.815	6.428	7.689	7.864				2.768			5.627	5.063	7.32		5.891
12/19/2007	12:00	7.521	4.767	1.807	6.416	7.71	7.872				2.755			5.615	5.053	7.314		5.874
12/19/2007	16:00	7.496	4.759	1.803	6.398	7.686	7.851				2.74			5.602	5.029	7.279		5.862
12/19/2007	20:00	7.489	4.738	1.78	6.385	7.658	7.83				2.734			5.592	5.018	7.266		5.848
12/20/2007	0:00	7.468	4.711	1.762	6.363	7.633	7.807				2.72			5.574	4.996	7.243		5.827
12/20/2007	4:00	7.446	4.68	1.737	6.336	7.602	7.78				2.7			5.555	4.973	7.221		5.809
12/20/2007	8:00	7.423	4.658	1.721	6.311	7.577	7.759				2.685			5.534	4.952	7.193		5.788
12/20/2007	12:00	7.411	4.645	1.701	6.293	7.557	7.735				2.675			5.514	4.937	7.179		5.772
12/20/2007	16:00	7.387	4.639	1.682	6.278	7.541	7.721				2.663			5.499	4.919	7.158		5.753
12/20/2007	20:00	7.368	4.616	1.666	6.26	7.527	7.702				2.649			5.483	4.899	7.143		5.732
12/21/2007	0:00	7.353	4.591	1.651	6.237	7.506	7.687				2.633			5.465	4.884	7.122		5.716
12/21/2007	4:00	7.333	4.569	1.627	6.213	7.482	7.664				2.61			5.442	4.861	7.097		5.695
12/21/2007	8:00	7.313	4.552	1.606	6.184	7.458	7.643				2.588			5.423	4.844	7.077		5.675
12/21/2007	12:00	7.293	4.529	1.588	6.161	7.437	7.629				2.568			5.407	4.827	7.054		5.66
12/21/2007	16:00	7.266	4.525	1.543	6.139	7.408	7.603				2.564			5.389	4.81	7.025		5.639
12/21/2007	20:00	7.245	4.508	1.525	6.118	7.389	7.591				2.549			5.363	4.797	7.004		5.6
12/22/2007	0:00	7.227	4.486	1.504	6.097	7.375	7.578				2.537			5.342	4.775	6.981		5.575
12/22/2007	4:00	7.211	4.467	1.481	6.073	7.357	7.557				2.521			5.314	4.757	6.962		5.53
12/22/2007	8:00	7.188	4.457	1.471	6.054	7.339	7.534				2.489			5.294	4.741	6.945		5.511
12/22/2007	12:00	7.174	4.455	1.463	6.036	7.326	7.515				2.46			5.279	4.728	6.931		5.499
12/22/2007	16:00	7.145	4.421	1.418	5.991	7.282	7.48				2.425			5.235	4.696	6.887		5.518
12/22/2007	20:00	7.105	4.397	1.389	5.958	7.256	7.444				2.378			5.201	4.676	6.85		5.458
12/23/2007	0:00	7.086	4.393	1.389	5.945	7.24	7.406				2.371			5.194	4.689	6.835		5.447
12/23/2007	4:00	7.065	4.39	1.383	5.925	7.217	7.4				2.367			5.177	4.705	6.815		5.419
12/23/2007	8:00	7.049	4.388	1.379	5.908	7.203	7.385				2.358			5.145	4.684	6.798		5.392
12/23/2007	12:00	7.028	4.395	1.381	5.9	7.188	7.37				2.346			5.106	4.67	6.79		5.365
12/23/2007	16:00	7.021	4.395	1.381	5.894	7.179	7.358				2.342			5.098	4.663	6.777		5.378
12/23/2007	20:00	7.01	4.392	1.391	5.884	7.176	7.347				2.336			5.057	4.64	6.768		5.351
12/24/2007	0:00	7.004	4.399	1.4	5.878	7.169	7.339				2.33			5.046	4.644	6.76		5.351
12/24/2007	4:00	6.99	4.399	1.405	5.869	7.158	7.326				2.325			5.071	4.648	6.75		5.359
12/24/2007	8:00	6.977	4.399	1.41	5.863	7.15	7.318				2.324			5.078	4.644	6.738		5.349
12/24/2007	12:00	6.967	4.41	1.418	5.865	7.132	7.31				2.316			5.089	4.619	6.735		5.343
12/24/2007	16:00	6.959	4.408	1.422	5.849	7.128	7.301				2.324			5.14	4.636	6.731		5.365
12/24/2007	20:00	6.947	4.406	1.424	5.841	7.121	7.289				2.332			5.185	4.65	6.71		5.369
12/25/2007	0:00	6.939	4.405	1.428	5.838	7.113	7.282				2.332			5.196	4.654	6.706		5.347
12/25/2007	4:00	6.932	4.399	1.428	5.828	7.1	7.274				2.342			5.157	4.646	6.696		5.355
12/25/2007	8:00	6.92	4.391	1.43	5.82	7.086	7.259				2.342			5.141	4.636	6.683		5.326
12/25/2007	12:00	6.919	4.395	1.43	5.822	7.075	7.257				2.338			5.152	4.629	6.683		5.303
12/25/2007	16:00	6.902	4.391	1.428	5.812	7.067	7.247				2.348			5.226	4.661	6.698		5.359
12/25/2007	20:00	6.894	4.385	1.426	5.806	7.063	7.236				2.342			5.175	4.631	6.658		5.289
12/26/2007	0:00	6.894	4.377	1.422	5.804	7.059	7.232				2.342			5.143	4.564	6.656		5.281
12/26/2007	4:00	6.883	4.37	1.424	5.795	7.054	7.227				2.344			5.126	4.556	6.648		5.293

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
12/26/2007	8:00	6.875	4.358	1.42	5.785	7.046	7.219				2.346			5.115	4.549	6.639		5.279
12/26/2007	12:00	6.871	4.352	1.416	5.777	7.049	7.209				2.338			5.113	4.541	6.641		5.277
12/26/2007	16:00	6.859	4.343	1.412	5.771	7.038	7.2				2.34			5.101	4.534	6.625		5.287
12/26/2007	20:00	6.861	4.341	1.41	5.762	7.033	7.196				2.336			5.089	4.436	6.623		5.242
12/27/2007	0:00	6.853	4.341	1.414	5.76	7.033	7.188				2.326			5.094	4.522	6.616		5.231
12/27/2007	4:00	6.855	4.339	1.418	5.758	7.031	7.191				2.326			5.096	4.52	6.619		5.203
12/27/2007	8:00	6.847	4.337	1.42	5.752	7.031	7.188				2.315			5.094	4.516	6.614		5.157
12/27/2007	12:00	6.849	4.345	1.422	5.756	7.03	7.189				2.309			5.098	4.516	6.625		5.126
12/27/2007	16:00	6.836	4.345	1.43	5.754	7.03	7.188				2.317			5.096	4.513	6.616		5.192
12/27/2007	20:00	6.838	4.343	1.436	5.746	7.028	7.181				2.312			5.098	4.513	6.61		5.188
12/28/2007	0:00	6.834	4.345	1.443	5.748	7.025	7.179				2.32			5.098	4.511	6.61		5.225
12/28/2007	4:00	6.822	4.337	1.432	5.736	7.006	7.17				2.327			5.092	4.499	6.594		5.279
12/28/2007	8:00	6.802	4.321	1.418	5.717	6.983	7.147				2.327			5.071	4.473	6.573		5.31
12/28/2007	12:00	6.789	4.321	1.424	5.717	6.98	7.144				2.322			5.041	4.446	6.569		5.281
12/28/2007	16:00	6.785	4.325	1.434	5.719	6.983	7.139				2.311			5.029	4.461	6.567		5.267
12/28/2007	20:00	6.789	4.329	1.451	5.715	6.991	7.137				2.303			5.01	4.465	6.571		5.213
12/29/2007	0:00	6.793	4.335	1.465	5.717	6.993	7.137				2.297			5.034	4.474	6.571		5.205
12/29/2007	4:00	6.798	4.345	1.479	5.723	6.994	7.141				2.239			5.052	4.444	6.573		5.203
12/29/2007	8:00	6.796	4.35	1.487	5.723	6.996	7.141				2.237			5.075	4.482	6.575		5.217
12/29/2007	12:00	6.808	4.362	1.494	5.738	6.983	7.15				2.238			5.094	4.488	6.575		5.213
12/29/2007	16:00	6.808	4.37	1.5	5.738	6.985	7.149				2.24			5.159	4.476	6.581		5.287
12/29/2007	20:00	6.793	4.368	1.514	5.732	7.001	7.147				2.247			5.143	4.448	6.577		5.283
12/30/2007	0:00	6.802	4.374	1.522	5.738	6.993	7.145				2.258			5.177	4.494	6.577		5.308
12/30/2007	4:00	6.796	4.374	1.532	5.734	6.998	7.143				2.262			5.231	4.492	6.575		5.366
12/30/2007	8:00	6.791	4.376	1.536	5.734	6.991	7.139				2.265			5.288	4.492	6.571		5.422
12/30/2007	12:00	6.804	4.383	1.535	5.746	6.967	7.147				2.263			5.325	4.49	6.567		5.463
12/30/2007	16:00	6.802	4.385	1.538	5.742	6.964	7.145				2.266			5.381	4.482	6.565		5.533
12/30/2007	20:00	6.785	4.383	1.551	5.738	6.985	7.141				2.269			5.316	4.41	6.567		5.477
12/31/2007	0:00	6.793	4.389	1.559	5.742	6.985	7.139				2.283			5.294	4.494	6.567		5.451
12/31/2007	4:00	6.8	4.399	1.565	5.748	6.972	7.147				2.283			5.33	4.494	6.567		5.496
12/31/2007	8:00	6.8	4.403	1.573	5.748	6.975	7.152				2.283			5.298	4.412	6.571		5.471
12/31/2007	12:00	6.802	4.412	1.588	5.756	6.99	7.154				2.295			5.198	4.416	6.577		5.37
12/31/2007	16:00	6.812	4.424	1.608	5.767	7.006	7.158				2.302			5.115	4.413	6.513		5.288
12/31/2007	20:00	6.824	4.443	1.637	5.781	7.035	7.168				2.321			5.062	4.357	6.421		5.141
1/1/2008	0:00	6.837	4.463	1.665	5.797	7.06	7.179				2.34			5.01	4.326	6.415		5.036
1/1/2008	4:00	6.847	4.482	1.694	5.814	7.084	7.189				2.348			4.985	4.387	6.409		4.984
1/1/2008	8:00	6.863	4.501	1.723	5.832	7.11	7.204				2.366			5.251	4.574	6.479		4.895
1/1/2008	12:00	6.898	4.524	1.749	5.859	7.12	7.233				2.378			5.273	4.595	6.579		4.838
1/1/2008	16:00	6.91	4.546	1.774	5.871	7.144	7.244				2.392			5.293	4.612	6.683		4.846
1/1/2008	20:00	6.91	4.563	1.805	5.886	7.177	7.261				2.411			5.316	4.633	6.733		4.809
1/2/2008	0:00	6.924	4.584	1.827	5.904	7.193	7.278				2.434			5.335	4.65	6.75		4.792
1/2/2008	4:00	6.943	4.602	1.85	5.925	7.208	7.291				2.448			5.356	4.667	6.767		4.765
1/2/2008	8:00	6.961	4.625	1.872	5.941	7.229	7.307				2.466			5.374	4.684	6.792		4.7
1/2/2008	12:00	7.008	4.65	1.889	5.976	7.222	7.341				2.472			5.413	4.699	6.813		4.989
1/2/2008	16:00	7.022	4.671	1.911	5.984	7.238	7.353				2.48			5.425	4.716	6.833		5.447
1/2/2008	20:00	7.006	4.673	1.938	5.984	7.273	7.366				2.505			5.423	4.73	6.837		5.478
1/3/2008	0:00	7.012	4.681	1.95	5.995	7.285	7.362				2.525			5.441	4.741	6.842		5.49
1/3/2008	4:00	7.018	4.687	1.956	6.005	7.273	7.364				2.535			5.457	4.743	6.842		5.496
1/3/2008	8:00	7.028	4.693	1.958	6.013	7.261	7.374				2.539			5.46	4.747	6.844		5.501

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
1/3/2008	12:00	7.057	4.702	1.95	6.028	7.23	7.396				2.535			5.484	4.751	6.846		5.492
1/3/2008	16:00	7.041	4.7	1.95	6.019	7.217	7.404				2.539			5.472	4.753	6.844		5.498
1/3/2008	20:00	7.031	4.695	1.954	6.013	7.237	7.395				2.557			5.46	4.669	6.835		5.513
1/4/2008	0:00	7.031	4.691	1.954	6.013	7.237	7.391				2.566			5.458	4.745	6.832		5.517
1/4/2008	4:00	7.026	4.691	1.948	6.017	7.225	7.389				2.569			5.455	4.742	6.833		5.513
1/4/2008	8:00	7.022	4.683	1.948	6.011	7.227	7.378				2.579			5.453	4.738	6.85		5.517
1/4/2008	12:00	7.035	4.687	1.94	6.023	7.206	7.383				2.573			5.462	4.736	6.865		5.509
1/4/2008	16:00	7.21	4.681	1.94	6.011	7.208	7.374	5.718	5.91		2.578			5.457	4.726	6.925		5.503
1/4/2008	20:00	7.122	4.679	1.936	6.007	7.208	7.366	5.713	5.905		2.586			5.522	4.726	6.802		5.55
1/5/2008	0:00	7.073	4.673	1.934	6.003	7.203	7.364	5.706	5.895		2.588			5.545	4.765	6.798		5.577
1/5/2008	4:00	7.043	4.666	1.932	5.997	7.195	7.362	5.696	5.886		2.588			5.441	4.759	6.79		5.608
1/5/2008	8:00	7.031	4.66	1.93	5.991	7.19	7.357	5.691	5.881		2.588			5.436	4.753	6.784		5.503
1/5/2008	12:00	7.031	4.66	1.93	5.995	7.185	7.362	5.689	5.888		2.59			5.601	4.879	6.862		5.62
1/5/2008	16:00	7.016	4.652	1.925	5.991	7.18	7.349	5.679	5.881		2.586			5.428	4.742	6.777		5.783
1/5/2008	20:00	7.012	4.646	1.903	5.991	7.182	7.354	5.67	5.876					5.42	4.738	6.775		5.763
1/6/2008	0:00	7.004	4.615	1.864	5.989	7.179	7.351	5.651	5.857					5.409	4.73	6.769		5.806
1/6/2008	4:00	6.994	4.579	1.811	5.978	7.164	7.345	5.61	5.838					5.385	4.717	6.76		5.823
1/6/2008	8:00	6.979	4.544	1.766	5.964	7.153	7.336	5.557	5.819					5.356	4.7	6.756		5.699
1/6/2008	12:00	6.977	4.519	1.719	5.952	7.145	7.326	5.516	5.802					5.325	4.684	6.755		5.656
1/6/2008	16:00	6.963	4.495	1.669	5.931	7.131	7.315	5.471	5.788					5.297	4.669	6.744		5.389
1/6/2008	20:00	6.922	4.468	1.624	5.915	7.118	7.303	5.435	5.776					5.27	4.656	6.733		5.363
1/7/2008	0:00	6.941	4.435	1.573	5.888	7.094	7.284	5.394	5.759					5.237	4.635	6.719		5.344
1/7/2008	4:00	6.92	4.403	1.52	5.859	7.063	7.261	5.353	5.738					5.198	4.612	6.692		5.319
1/7/2008	8:00	6.896	4.368	1.469	5.826	7.033	7.233	5.31	5.714					5.159	4.587	6.665		5.292
1/7/2008	12:00	6.875	4.348	1.428	5.804	7.012	7.219	5.287	5.692					5.126	4.572	6.644		5.28
1/7/2008	16:00	6.857	4.327	1.393	5.777	6.988	7.2	5.258	5.683		2.511	5.361	4.99	5.103	4.549	6.617	5.717	5.253
1/7/2008	20:00	6.838	4.3	1.364	5.748	6.969	7.181	5.233	5.666	8.235	2.524	5.077	4.964	5.08	4.528	6.592	5.747	5.239
1/8/2008	0:00	6.818	4.275	1.332	5.721	6.946	7.16	5.205	5.652	8.204	2.52	5.085	4.935	5.057	4.507	6.561	5.722	5.222
1/8/2008	4:00	6.798	4.25	1.301	5.69	6.916	7.137	5.179	5.633	8.168	2.484	5.073	4.906	5.031	4.484	6.526	5.692	5.202
1/8/2008	8:00	6.771	4.229	1.272	5.658	6.89	7.112	5.152	5.611	8.137	2.445	5.006	4.878	4.976	4.418	6.49	5.639	5.177
1/8/2008	12:00	6.753	4.209	1.254	5.635	6.871	7.091	5.133	5.592	8.115	2.429	5.01	4.858	5.015	4.421	6.463	5.657	5.072
1/8/2008	16:00	6.732	4.2	1.231	5.614	6.853	7.072	5.119	5.58	8.099	2.421	5.023	4.84	4.955	4.423	6.44	5.618	5.096
1/8/2008	20:00	6.718	4.19	1.223	5.602	6.844	7.055	5.109	5.575	8.088	2.373	4.843	4.827	4.945	4.41	6.424	5.604	5.121
1/9/2008	0:00	6.71	4.18	1.221	5.584	6.831	7.047	5.097	5.563	8.07	2.375	5.043	4.819	4.936	4.399	6.402	5.586	5.109
1/9/2008	4:00	6.691	4.169	1.213	5.565	6.808	7.028	5.081	5.549	8.051	2.515	5.327	4.803	4.922	4.383	6.379	5.568	5.09
1/9/2008	8:00	6.669	4.159	1.209	5.542	6.786	7.007	5.066	5.532	8.021	2.576	5.421	4.788	4.91	4.366	6.351	5.552	5.074
1/9/2008	12:00	6.65	4.157	1.211	5.526	6.768	6.984	5.057	5.52	8.001	2.627	5.444	4.772	4.903	4.361	6.33	5.54	5.061
1/9/2008	16:00	6.622	4.145	1.19	5.497	6.734	6.961	5.037	5.511	7.961	2.283	5.389	4.757	4.883	4.341	6.297	5.517	5.041
1/9/2008	20:00	6.601	4.132	1.184	5.483	6.712	6.946	5.018	5.487	7.939	2.261	5.36	4.737	4.871	4.322	6.272	5.496	5.02
1/10/2008	0:00	6.585	4.116	1.174	5.466	6.691	6.931	4.999	5.473	7.914	2.257	5.352	4.724	4.857	4.309	6.251	5.483	5.006
1/10/2008	4:00	6.565	4.099	1.16	5.444	6.664	6.91	4.97	5.453	7.884	2.237	5.335	4.704	4.841	4.292	6.222	5.46	4.989
1/10/2008	8:00	6.536	4.08	1.139	5.421	6.637	6.889	4.946	5.437	7.852	2.221	5.29	4.682	4.82	4.271	6.192	5.434	4.969
1/10/2008	12:00	6.516	4.068	1.125	5.403	6.616	6.87	4.927	5.415	7.83	2.17	5.26	4.662	4.792	4.229	6.167	5.432	4.925
1/10/2008	16:00	6.489	4.053	1.106	5.38	6.597	6.847	4.911	5.391	7.812	2.198	5.227	4.642	4.755	4.25	6.232	5.441	4.876
1/10/2008	20:00	6.471	4.047	1.104	5.372	6.587	6.835	4.906	5.389	7.808	2.097	5.121	4.638	4.769	4.219	6.132	5.384	4.892
1/11/2008	0:00	6.469	4.041	1.104	5.366	6.582	6.824	4.903	5.379	7.806	2.054	5.186	4.634	4.765	4.212	6.126	5.373	4.901
1/11/2008	4:00	6.46	4.037	1.106	5.355	6.574	6.814	4.901	5.377	7.797	2.101	5.214	4.629	4.762	4.206	6.118	5.361	4.892
1/11/2008	8:00	6.444	4.033	1.106	5.345	6.561	6.801	4.896	5.358	7.788	2.12	5.204	4.623	4.757	4.2	6.103	5.352	4.884
1/11/2008	12:00	6.442	4.035	1.112	5.337	6.548	6.786	4.899	5.344	7.783	2.136	5.259	4.618	4.776	4.195	6.095	5.343	4.882

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
1/11/2008	16:00	6.417	4.037	1.1	5.327	6.539	6.774	4.891	5.332	7.763	2.142	5.194	4.616	4.744	4.187	6.08	5.333	4.884
1/11/2008	20:00	6.411	4.028	1.102	5.322	6.529	6.765	4.884	5.329	7.757	2.069	5.162	4.612	4.737	4.179	6.072	5.327	4.841
1/12/2008	0:00	6.405	4.016	1.102	5.316	6.524	6.761	4.879	5.319	7.754	2.118	5.132	4.605	4.737	4.176	6.065	5.324	4.83
1/12/2008	4:00	6.401	4.014	1.1	5.308	6.524	6.759	4.875	5.313	7.754	2.075	5.096	4.598	4.734	4.17	6.061	5.317	4.841
1/12/2008	8:00	6.399	4.014	1.106	5.302	6.521	6.753	4.875	5.32	7.754	1.99	5.018	4.594	4.732	4.164	6.057	5.311	4.837
1/12/2008	12:00	6.397	4.022	1.117	5.302	6.528	6.751	4.881	5.308	7.761	1.892	5.114	4.594	4.734	4.166	6.061	5.308	4.837
1/12/2008	16:00	6.393	4.029	1.129	5.302	6.529	6.748	4.891	5.305	7.768	1.892	5.167	4.601	4.735	4.168	6.059	5.313	4.832
1/12/2008	20:00	6.395	4.037	1.147	5.302	6.534	6.748	4.906	5.298	7.768	1.845	5.157	4.603	4.741	4.17	6.059	5.317	4.832
1/13/2008	0:00	6.393	4.049	1.168	5.306	6.539	6.748	4.92	5.305	7.779	1.837	5.167	4.61	4.75	4.176	6.061	5.324	4.832
1/13/2008	4:00	6.393	4.06	1.188	5.306	6.542	6.753	4.934	5.303	7.777	1.927	5.165	4.616	4.762	4.179	6.063	5.327	4.839
1/13/2008	8:00	6.395	4.07	1.207	5.31	6.542	6.751	4.946	5.301	7.783	1.931	5.167	4.621	4.772	4.185	6.063	5.331	4.837
1/13/2008	12:00	6.401	4.091	1.233	5.314	6.542	6.751	4.965	5.31	7.792	1.933	5.198	4.627	4.783	4.197	6.072	5.338	4.841
1/13/2008	16:00	6.389	4.105	1.264	5.316	6.548	6.755	4.972	5.303	7.783	2.002	5.182	4.636	4.792	4.197	6.07	5.35	4.851
1/13/2008	20:00	6.391	4.116	1.289	5.318	6.55	6.757	4.982	5.303	7.783	1.988	5.175	4.647	4.801	4.204	6.07	5.352	4.853
1/14/2008	0:00	6.395	4.126	1.311	5.327	6.551	6.761	4.999	5.303	7.788	1.925	5.179	4.656	4.815	4.212	6.072	5.363	4.858
1/14/2008	4:00	6.401	4.138	1.338	5.335	6.565	6.769	5.016	5.31	7.795	1.878	5.18	4.669	4.829	4.22	6.078	5.375	4.866
1/14/2008	8:00	6.401	4.149	1.36	5.339	6.574	6.776	5.037	5.31	7.808	1.984	5.177	4.678	4.845	4.229	6.086	5.389	4.87
1/14/2008	12:00	6.417	4.153	1.381	5.349	6.573	6.778	5.061	5.324	7.826	1.996	5.214	4.678	4.862	4.24	6.099	5.4	4.876
1/14/2008	16:00	6.407	4.178	1.411	5.355	6.563	6.78	5.078	5.324	7.83	2.027	5.214	4.696	4.874	4.248	6.105	5.409	4.889
1/14/2008	20:00	6.417	4.196	1.436	5.368	6.569	6.786	5.09	5.32	7.826	2.006	5.206	4.716	4.889	4.258	6.109	5.423	4.899
1/15/2008	0:00	6.415	4.211	1.461	5.37	6.582	6.795	5.102	5.322	7.83	2.029	5.202	4.727	4.904	4.265	6.111	5.43	4.907
1/15/2008	4:00	6.409	4.225	1.479	5.378	6.59	6.799	5.112	5.329	7.83	2.108	5.204	4.733	4.918	4.273	6.111	5.432	4.913
1/15/2008	8:00	6.407	4.236	1.495	5.382	6.59	6.801	5.119	5.334	7.823	2.218	5.202	4.742	4.929	4.28	6.111	5.439	4.924
1/15/2008	12:00	6.432	4.254	1.497	5.384	6.563	6.797	5.121	5.345	7.823	2.319	5.249	4.753	4.942	4.287	6.113	5.448	4.92
1/15/2008	16:00	6.407	4.26	1.516	5.376	6.561	6.807	5.119	5.341	7.799	2.249	5.225	4.756	4.945	4.288	6.107	5.451	4.934
1/15/2008	20:00	6.413	4.269	1.53	5.382	6.565	6.811	5.119	5.343	7.792	2.265	5.208	4.76	4.952	4.29	6.099	5.448	4.942
1/16/2008	0:00	6.413	4.279	1.54	5.384	6.566	6.811	5.114	5.343	7.783	2.271	5.2	4.764	4.956	4.296	6.095	5.448	4.942
1/16/2008	4:00	6.409	4.287	1.555	5.386	6.568	6.816	5.119	5.348	7.783	2.283	5.2	4.769	4.962	4.298	6.095	5.453	4.946
1/16/2008	8:00	6.413	4.302	1.567	5.396	6.574	6.824	5.128	5.353	7.795	2.202	5.212	4.775	4.971	4.306	6.103	5.462	4.951
1/16/2008	12:00	6.422	4.318	1.592	5.411	6.568	6.832	5.145	5.36	7.81	2.102	5.224	4.786	4.984	4.317	6.118	5.469	4.963
1/16/2008	16:00	6.426	4.329	1.618	5.415	6.577	6.839	5.16	5.369	7.823	2.119	5.222	4.8	5	4.325	6.124	5.478	4.969
1/16/2008	20:00	6.436	4.339	1.639	5.423	6.6	6.845	5.174	5.375	7.828	2.07	5.22	4.804	5.01	4.33	6.132	5.485	4.975
1/17/2008	0:00	6.434	4.335	1.641	5.421	6.603	6.843	5.181	5.372	7.828	2.064	5.218	4.804	5.01	4.327	6.128	5.485	4.977
1/17/2008	4:00	6.426	4.339	1.647	5.421	6.606	6.841	5.184	5.365	7.832	2.05	5.228	4.813	5.017	4.328	6.126	5.49	4.975
1/17/2008	8:00	6.432	4.35	1.667	5.427	6.617	6.853	5.203	5.377	7.839	2.084	5.228	4.828	5.033	4.336	6.134	5.504	4.986
1/17/2008	12:00	6.436	4.37	1.688	5.442	6.622	6.858	5.222	5.377	7.866	2.056	5.244	4.837	5.052	4.348	6.145	5.517	4.996
1/17/2008	16:00	6.446	4.383	1.706	5.454	6.64	6.866	5.231	5.398	7.866	2.113	5.259	4.855	5.109	4.336	6.155	5.527	5.002
1/17/2008	20:00	6.458	4.397	1.727	5.466	6.654	6.881	5.248	5.415	7.87	2.117	5.261	4.868	5.116	4.315	6.165	5.54	5.023
1/18/2008	0:00	6.466	4.406	1.747	5.475	6.664	6.891	5.265	5.415	7.879	2.121	5.267	4.879	5.13	4.315	6.174	5.55	5.031
1/18/2008	4:00	6.473	4.416	1.76	5.485	6.669	6.898	5.275	5.422	7.89	2.222	5.275	4.89	5.151	4.386	6.18	5.559	5.037
1/18/2008	8:00	6.485	4.43	1.774	5.497	6.677	6.906	5.289	5.425	7.91	2.234	5.285	4.901	5.135	4.395	6.195	5.568	5.048
1/18/2008	12:00	6.513	4.453	1.788	5.518	6.682	6.929	5.31	5.439	7.939	2.247	5.326	4.915	4.994	4.412	6.217	5.591	5.054
1/18/2008	16:00	6.532	4.476	1.817	5.532	6.719	6.95	5.342	5.474	7.957	2.265	5.337	4.936	4.949	4.342	6.238	5.609	5.07
1/18/2008	20:00	6.536	4.495	1.86	5.547	6.767	6.969	5.378	5.489	7.982	2.297	5.345	4.961	5.031	4.233	6.257	5.63	5.1
1/19/2008	0:00	6.552	4.521	1.893	5.575	6.794	6.988	5.413	5.498	8.013	2.32	5.363	4.985	5.04	4.464	6.28	5.653	5.122
1/19/2008	4:00	6.569	4.536	1.919	5.592	6.808	7.005	5.437	5.51	8.037	2.332	5.381	5.003	5.081	4.481	6.301	5.676	5.136
1/19/2008	8:00	6.583	4.559	1.946	5.612	6.826	7.021	5.464	5.525	8.059	2.346	5.402	5.025	5.075	4.502	6.319	5.694	5.151
1/19/2008	12:00	6.622	4.594	1.962	5.643	6.828	7.038	5.487	5.517	8.091	2.354	5.416	5.056	5.096	4.521	6.342	5.713	5.164
1/19/2008	16:00	6.644	4.613	1.977	5.649	6.84	7.055	5.504	5.568	8.1	2.36	5.463	5.071	5.209	4.536	6.365	5.738	5.172

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
1/19/2008	20:00	6.638	4.621	2.02	5.655	6.887	7.08	5.531	5.589	8.102	2.393	5.457	5.084	5.23	4.553	6.378	5.756	5.213
1/20/2008	0:00	6.648	4.635	2.04	5.68	6.903	7.095	5.55	5.594	8.115	2.419	5.473	5.102	5.244	4.572	6.39	5.775	5.238
1/20/2008	4:00	6.665	4.652	2.048	5.699	6.901	7.103	5.557	5.592	8.128	2.43	5.491	5.117	5.278	4.584	6.403	5.788	5.242
1/20/2008	8:00	6.693	4.673	2.057	5.711	6.908	7.124	5.574	5.606	8.142	2.442	5.508	5.13	5.262	4.597	6.417	5.802	5.25
1/20/2008	12:00	6.712	4.696	2.073	5.736	6.916	7.137	5.593	5.615	8.164	2.456	5.529	5.152	5.262	4.614	6.436	5.818	5.267
1/20/2008	16:00	6.726	4.711	2.083	5.742	6.921	7.152	5.6	5.661	8.162	2.461	5.545	5.166	5.388	4.62	6.446	5.834	5.283
1/20/2008	20:00	6.724	4.714	2.116	5.746	6.958	7.173	5.617	5.673	8.162	2.491	5.538	5.174	5.411	4.637	6.455	5.848	5.31
1/21/2008	0:00	6.724	4.725	2.134	5.764	6.977	7.181	5.631	5.673	8.168	2.515	5.541	5.186	5.425	4.651	6.469	5.857	5.333
1/21/2008	4:00	6.73	4.731	2.136	5.781	6.972	7.181	5.631	5.673	8.171	2.526	5.547	5.199	5.513	4.656	6.471	5.864	5.337
1/21/2008	8:00	6.738	4.739	2.134	5.781	6.964	7.194	5.631	5.67	8.167	2.526	5.555	5.203	5.566	4.662	6.474	5.871	5.337
1/21/2008	12:00	6.765	4.754	2.122	5.797	6.951	7.198	5.631	5.67	8.184	2.528	5.588	5.216	5.606	4.672	6.482	5.885	5.335
1/21/2008	16:00	6.771	4.764	2.128	5.797	6.951	7.208	5.631	5.711	8.177	2.532	5.586	5.214	5.615	4.651	6.486	5.883	5.345
1/21/2008	20:00	6.773	4.764	2.143	5.801	6.97	7.223	5.641	5.718	8.177	2.554	5.581	5.219	5.545	4.55	6.494	5.89	5.36
1/22/2008	0:00	6.779	4.776	2.167	5.818	7.002	7.24	5.663	5.728	8.198	2.585	5.579	5.23	5.448	4.477	6.511	5.901	5.384
1/22/2008	4:00	6.781	4.787	2.19	5.832	7.028	7.25	5.686	5.73	8.22	2.609	5.583	5.243	5.418	4.708	6.526	5.917	5.397
1/22/2008	8:00	6.785	4.797	2.208	5.847	7.039	7.257	5.706	5.735	8.242	2.615	5.596	5.259	5.408	4.717	6.538	5.933	5.403
1/22/2008	12:00	6.82	4.824	2.208	5.884	7.035	7.267	5.717	5.723	8.267	2.611	5.614	5.285	5.424	4.731	6.553	5.942	5.403
1/22/2008	16:00	6.845	4.841	2.216	5.884	7.041	7.273	5.727	5.783	8.273	2.611	5.665	5.296	5.531	4.738	6.569	5.954	5.403
1/22/2008	20:00	6.834	4.841	2.247	5.88	7.068	7.294	5.744	5.795	8.267	2.635	5.649	5.294	5.529	4.75	6.576	5.965	5.434
1/23/2008	0:00	6.832	4.841	2.265	5.894	7.083	7.307	5.751	5.792	8.271	2.658	5.651	5.3	5.541	4.761	6.582	5.979	5.459
1/23/2008	4:00	6.84	4.845	2.269	5.902	7.079	7.313	5.756	5.792	8.269	2.668	5.659	5.307	5.554	4.769	6.586	5.981	5.465
1/23/2008	8:00	6.845	4.849	2.265	5.91	7.075	7.32	5.753	5.792	8.271	2.672	5.663	5.311	5.555	4.771	6.59	5.984	5.463
1/23/2008	12:00	6.879	4.869	2.251	5.929	7.059	7.33	5.749	5.778	8.289	2.664	5.69	5.34	5.58	4.776	6.596	5.993	5.455
1/23/2008	16:00	6.892	4.886	2.261	5.929	7.067	7.351	5.765	5.838	8.305	2.67	5.727	5.34	5.57	4.786	6.617	6.007	5.465
1/23/2008	20:00	6.908	4.901	2.292	5.937	7.116	7.37	5.789	5.852	8.315	2.702	5.706	5.351	5.58	4.799	6.636	6.021	5.496
1/24/2008	0:00	6.904	4.915	2.335	5.96	7.156	7.38	5.823	5.859	8.345	2.739	5.702	5.36	5.599	4.818	6.653	6.041	5.521
1/24/2008	4:00	6.902	4.927	2.358	5.978	7.172	7.393	5.849	5.869	8.369	2.753	5.721	5.375	5.617	4.835	6.669	6.06	5.533
1/24/2008	8:00	6.914	4.942	2.376	5.999	7.184	7.406	5.868	5.876	8.394	2.761	5.739	5.393	5.633	4.851	6.686	6.076	5.542
1/24/2008	12:00	6.967	4.973	2.376	6.032	7.18	7.427	5.882	5.866	8.418	2.751	5.759	5.451	5.687	4.866	6.7	6.092	5.538
1/24/2008	16:00	6.998	5	2.386	6.038	7.19	7.435	5.9	5.916	8.434	2.757	5.821	5.459	5.693	4.883	6.727	6.112	5.544
1/24/2008	20:00	6.992	5.01	2.437	6.032	7.229	7.458	5.924	5.94	8.434	2.786	5.806	5.455	5.686	4.896	6.74	6.126	5.589
1/25/2008	0:00	6.984	5.01	2.462	6.05	7.246	7.467	5.938	5.94	8.443	2.816	5.813	5.461	5.703	4.912	6.748	6.138	5.618
1/25/2008	4:00	7.002	5.021	2.458	6.067	7.237	7.485	5.938	5.936	8.447	2.822	5.839	5.484	5.728	4.925	6.761	6.149	5.62
1/25/2008	8:00	7.024	5.035	2.454	6.073	7.224	7.5	5.936	5.94	8.445	2.822	5.847	5.499	5.745	4.933	6.765	6.158	5.62
1/25/2008	12:00	7.031	5.046	2.456	6.087	7.233	7.502	5.938	5.95	8.452	2.824	5.861	5.517	5.756	4.938	6.771	6.165	5.624
1/25/2008	16:00	7.037	5.052	2.458	6.089	7.237	7.506	5.943	5.986	8.445	2.832	5.861	5.515	5.752	4.942	6.775	6.17	5.641
1/25/2008	20:00	7.039	5.054	2.468	6.095	7.249	7.519	5.943	5.988	8.438	2.849	5.843	5.517	5.752	4.942	6.78	6.172	5.657
1/26/2008	0:00	7.035	5.054	2.48	6.1	7.262	7.523	5.948	6.003	8.44	2.869	5.839	5.51	5.756	4.95	6.782	6.177	5.67
1/26/2008	4:00	7.035	5.056	2.487	6.108	7.267	7.532	5.952	5.995	8.445	2.881	5.847	5.51	5.761	4.958	6.788	6.181	5.68
1/26/2008	8:00	7.037	5.056	2.484	6.116	7.267	7.538	5.95	5.988	8.456	2.889	5.861	5.519	5.774	4.962	6.79	6.188	5.68
1/26/2008	12:00	7.067	5.072	2.474	6.13	7.272	7.544	5.959	6.019	8.474	2.889	5.894	5.537	5.788	4.971	6.809	6.202	5.674
1/26/2008	16:00	7.075	5.089	2.491	6.143	7.29	7.557	5.976	6.031	8.485	2.9	5.894	5.543	5.809	4.929	6.822	6.202	5.688
1/26/2008	20:00	7.084	5.099	2.511	6.151	7.307	7.569	5.986	6.034	8.498	2.916	5.892	5.554	5.781	4.887	6.836	6.211	5.703
1/27/2008	0:00	7.094	5.102	2.525	6.161	7.318	7.578	6	6.038	8.509	2.924	5.894	5.567	5.81	4.994	6.844	6.223	5.709
1/27/2008	4:00	7.1	5.102	2.538	6.171	7.328	7.588	6.01	6.05	8.518	2.935	5.896	5.576	5.817	4.997	6.853	6.237	5.717
1/27/2008	8:00	7.104	5.101	2.55	6.178	7.339	7.595	6.021	6.053	8.527	2.944	5.91	5.581	5.828	5.001	6.863	6.25	5.727
1/27/2008	12:00	7.114	5.101	2.548	6.184	7.339	7.603	6.027	6.077	8.538	2.946	5.947	5.583	5.851	5.007	6.878	6.271	5.734
1/27/2008	16:00	7.118	5.097	2.552	6.184	7.339	7.605	6.029	6.069	8.532	3.089	5.943	5.607	5.839	5.232	6.88	6.505	5.796
1/27/2008	20:00	7.122	5.085	2.556	6.19	7.339	7.607	6.015	6.079	8.518	3.148	5.937	5.585	5.842	4.999	6.878	6.266	5.763

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
1/28/2008	0:00	7.118	5.064	2.521	6.186	7.33	7.605	5.993	6.062	8.507	3.15	5.927	5.576	5.834	4.988	6.876	6.255	5.769
1/28/2008	4:00	7.112	5.039	2.482	6.18	7.317	7.597	5.967	6.057	8.489	3.168	5.92	5.563	5.818	4.973	6.865	6.246	5.784
1/28/2008	8:00	7.102	5.01	2.398	6.165	7.296	7.586	5.936	6.048	8.46	3.172	5.902	5.541	5.793	4.954	6.849	6.23	5.798
1/28/2008	12:00	7.092	4.975	2.21	6.161	7.273	7.576	5.907	6.034	8.438	3.109	5.898	5.512	5.767	4.935	6.832	6.218	5.949
1/28/2008	16:00	7.08	4.925	2.084	6.141	7.248	7.557	5.864	6.017	8.41	3.099	5.892	5.482	5.735	4.91	6.813	6.195	6.25
1/28/2008	20:00	7.075	4.901	2.106	6.126	7.23	7.54	5.835	6.012	8.394	2.946	5.869	5.449	5.698	4.891	6.799	6.172	6.18
1/29/2008	0:00	7.063	4.872	2.079	6.108	7.219	7.521	5.801	5.998	8.374	2.918	5.953	5.427	5.67	4.866	6.784	6.152	6.052
1/29/2008	4:00	7.051	4.84	2.041	6.089	7.205	7.502	5.77	5.988	8.358	2.9	6.019	5.398	5.642	4.84	6.765	6.124	6.039
1/29/2008	8:00	7.047	4.818	2.049	6.077	7.205	7.496	5.751	5.979	8.362	2.7	5.785	5.378	5.616	4.822	6.759	6.113	5.663
1/29/2008	12:00	7.051	4.789	2.082	6.067	7.209	7.498	5.751	5.967	8.378	2.849	5.839	5.361	5.596	4.809	6.759	6.101	5.633
1/29/2008	16:00	7.051	4.77	2.083	6.067	7.217	7.488	5.754	5.974	8.394	2.827	5.847	5.352	5.562	4.794	6.755	6.097	5.627
1/29/2008	20:00	7.055	4.774	2.091	6.065	7.232	7.477	5.765	5.964	8.41	2.827	5.845	5.354	5.586	4.792	6.761	6.097	5.629
1/30/2008	0:00	7.051	4.774	2.095	6.063	7.237	7.471	5.773	5.962	8.423	2.813	5.845	5.354	5.585	4.788	6.761	6.094	5.62
1/30/2008	4:00	7.049	4.774	2.111	6.06	7.24	7.471	5.78	5.962	8.429	2.802	5.843	5.354	5.589	4.784	6.759	6.092	5.62
1/30/2008	8:00	7.051	4.776	2.124	6.06	7.238	7.467	5.782	5.957	8.436	2.792	5.849	5.359	5.592	4.782	6.757	6.085	5.618
1/30/2008	12:00	7.069	4.778	2.124	6.071	7.217	7.464	5.785	5.96	8.443	2.774	5.863	5.361	5.601	4.782	6.761	6.085	5.614
1/30/2008	16:00	7.051	4.774	2.13	6.052	7.214	7.467	5.782	5.96	8.427	2.776	5.871	5.354	5.593	4.781	6.753	6.085	5.616
1/30/2008	20:00	7.059	4.778	2.145	6.048	7.221	7.456	5.785	5.95	8.425	2.784	5.845	5.35	5.587	4.784	6.753	6.08	5.62
1/31/2008	0:00	7.051	4.783	2.155	6.054	7.23	7.45	5.792	5.95	8.427	2.784	5.845	5.352	5.593	4.788	6.747	6.08	5.62
1/31/2008	4:00	7.049	4.789	2.165	6.054	7.23	7.456	5.797	5.945	8.436	2.78	5.859	5.359	5.596	4.788	6.749	6.085	5.618
1/31/2008	8:00	7.063	4.803	2.177	6.067	7.235	7.469	5.806	5.948	8.445	2.78	5.869	5.365	5.601	4.796	6.757	6.087	5.614
1/31/2008	12:00	7.073	4.793	2.175	6.069	7.23	7.471	5.813	5.95	8.458	2.778	5.892	5.363	5.607	4.801	6.763	6.097	5.616
1/31/2008	16:00	7.065	4.789	2.183	6.067	7.235	7.469	5.818	5.957	8.452	2.778	5.886	5.359	5.603	4.807	6.765	6.099	5.618
1/31/2008	20:00	7.078	4.807	2.204	6.067	7.253	7.471	5.833	5.957	8.456	2.786	5.873	5.367	5.61	4.815	6.769	6.108	5.627
2/1/2008	0:00	7.071	4.822	2.222	6.071	7.262	7.471	5.837	5.96	8.459	2.79	5.863	5.374	5.619	4.822	6.765	6.106	5.633
2/1/2008	4:00	7.063	4.832	2.229	6.075	7.257	7.473	5.84	5.964	8.459	2.79	5.867	5.383	5.626	4.828	6.765	6.103	5.633
2/1/2008	8:00	7.059	4.843	2.245	6.075	7.264	7.477	5.842	5.962	8.461	2.796	5.865	5.392	5.633	4.834	6.767	6.108	5.633
2/1/2008	12:00	7.078	4.789	2.233	6.085	7.24	7.481	5.842	5.964	8.467	2.79	5.893	5.42	5.642	4.84	6.772	6.113	5.627
2/1/2008	16:00	7.065	4.816	2.239	6.079	7.237	7.483	5.84	5.969	8.452	2.79	5.895	5.403	5.647	4.843	6.772	6.117	5.635
2/1/2008	20:00	7.073	4.841	2.249	6.081	7.246	7.49	5.84	5.974	8.454	2.802	5.885	5.405	5.645	4.849	6.774	6.122	5.643
2/2/2008	0:00	7.073	4.857	2.257	6.083	7.248	7.488	5.842	5.971	8.452	2.807	5.879	5.407	5.649	4.849	6.776	6.122	5.643
2/2/2008	4:00	7.069	4.865	2.267	6.081	7.248	7.488	5.845	5.971	8.45	2.811	5.875	5.407	5.649	4.851	6.774	6.119	5.644
2/2/2008	8:00	7.071	4.876	2.282	6.085	7.257	7.494	5.852	5.971	8.456	2.813	5.871	5.412	5.654	4.857	6.778	6.124	5.643
2/2/2008	12:00	7.075	4.892	2.292	6.095	7.259	7.498	5.861	5.981	8.472	2.823	5.9	5.423	5.665	4.868	6.786	6.133	5.649
2/2/2008	16:00	7.075	4.905	2.306	6.106	7.269	7.509	5.878	5.986	8.483	2.831	5.908	5.432	5.674	4.874	6.799	6.142	5.656
2/2/2008	20:00	7.088	4.919	2.329	6.118	7.285	7.517	5.888	5.991	8.501	2.839	5.902	5.449	5.689	4.885	6.809	6.149	5.668
2/3/2008	0:00	7.098	4.93	2.349	6.124	7.298	7.527	5.902	5.995	8.512	2.849	5.91	5.46	5.703	4.895	6.819	6.161	5.677
2/3/2008	4:00	7.104	4.938	2.362	6.128	7.304	7.527	5.912	6.003	8.516	2.855	5.91	5.469	5.712	4.901	6.826	6.168	5.681
2/3/2008	8:00	7.102	4.942	2.37	6.137	7.304	7.534	5.916	6.01	8.519	2.861	5.92	5.476	5.721	4.906	6.828	6.172	5.687
2/3/2008	12:00	7.106	4.948	2.378	6.143	7.306	7.536	5.921	6.017	8.51	2.865	5.928	5.478	5.733	4.91	6.832	6.189	5.695
2/3/2008	16:00	7.098	4.94	2.374	6.134	7.293	7.534	5.909	6.022	8.499	2.857	5.92	5.478	5.726	5.036	6.822	6.175	5.877
2/3/2008	20:00	7.106	4.94	2.376	6.141	7.298	7.54	5.909	6.014	8.499	2.867	5.922	5.48	5.733	4.906	6.826	6.179	5.829
2/4/2008	0:00	7.106	4.94	2.378	6.143	7.299	7.54	5.909	6.019	8.496	2.878	5.92	5.478	5.735	4.906	6.83	6.179	5.85
2/4/2008	4:00	7.098	4.927	2.37	6.139	7.283	7.532	5.89	6.026	8.483	2.882	5.908	5.471	5.735	4.895	6.817	6.172	5.994
2/4/2008	8:00	7.096	4.917	2.36	6.13	7.276	7.529	5.883	6.014	8.474	2.872	5.904	5.465	5.753	4.891	6.828	6.168	6.067
2/4/2008	12:00	7.09	4.898	2.355	6.132	7.282	7.536	5.885	6.012	8.476	2.878	6.196	5.456	5.857	4.969	6.855	6.184	6.131
2/4/2008	16:00	7.094	4.898	2.355	6.132	7.285	7.532	5.885	6.014	8.483	2.88	6.401	5.454	5.714	4.883	6.819	6.168	6.04
2/4/2008	20:00	7.11	4.905	2.36	6.143	7.299	7.536	5.902	6.034	8.503	2.89	6.237	5.458	5.721	4.889	6.83	6.177	5.697
2/5/2008	0:00	7.12	4.913	2.372	6.147	7.317	7.546	5.924	6.029	8.523	2.9	6.309	5.465	5.728	4.891	6.846	6.191	5.705

TABLE S3.2 (Cont.)

		Water Level (ft below top of casing) in Indicated Well																
Date	Time	KDHEP-1	KDHEP-3	MW7	MW10	KDHEP-2	MW4	MW5	MW6	MW8	MW9	MW11	MW12	MW13	MW14	MW15	MW16	MW17
2/5/2008	4:00	7.127	4.915	2.382	6.153	7.328	7.553	5.936	6.043	8.536	2.904	6.327	5.471	5.733	4.893	6.853	6.195	5.71
2/5/2008	8:00	7.129	4.911	2.384	6.157	7.334	7.557	5.945	6.046	8.55	2.894	6.241	5.48	5.739	4.893	6.861	6.202	5.712
2/5/2008	12:00	7.114	4.896	2.376	6.145	7.326	7.55	5.94	6.026	8.536	2.933	6.247	5.465	5.818	4.891	6.853	6.198	5.728
2/5/2008	16:00	7.114	4.886	2.374	6.145	7.328	7.55	5.943	6.026	8.532	2.939	6.278	5.458	5.825	4.891	6.849	6.191	5.765
2/5/2008	20:00	7.122	4.88	2.37	6.139	7.33	7.553	5.94	6.024	8.536	2.916	6.208	5.456	5.797	4.859	6.849	6.193	5.755
2/6/2008	0:00	7.116	4.867	2.358	6.128	7.33	7.546	5.936	6.007	8.521	2.914	5.975	5.43	5.783	4.862	6.838	6.182	5.763
2/6/2008	4:00	7.094	4.84	2.331	6.106	7.309	7.525	5.912	5.988	8.508	2.908	5.928	5.416	5.791	4.864	6.809	6.168	5.788
2/6/2008	8:00	7.082	4.822	2.321	6.095	7.304	7.517	5.904	5.981	8.501	2.845	5.883	5.406	5.719	4.798	6.801	6.156	5.716
2/6/2008	12:00	7.082	4.822	2.327	6.102	7.309	7.519	5.914	5.981	8.519	2.78	5.91	5.408	5.656	4.745	6.811	6.161	5.654
2/6/2008	16:00	7.092	4.826	2.335	6.104	7.318	7.525	5.921	5.998	8.525	2.78	5.912	5.412	5.661	4.762	6.816	6.163	5.662
2/6/2008	20:00	7.096	4.83	2.349	6.11	7.331	7.534	5.936	6.007	8.536	2.707	5.914	5.425	5.612	4.724	6.826	6.177	5.604
2/7/2008	0:00	7.098	4.835	2.362	6.118	7.344	7.542	5.95	6.01	8.554	2.699	5.926	5.434	5.631	4.748	6.834	6.184	5.59
2/7/2008	4:00	7.112	4.84	2.372	6.124	7.35	7.548	5.957	6.012	8.559	2.719	5.932	5.439	5.665	4.796	6.841	6.189	5.691
2/7/2008	8:00	7.122	4.841	2.376	6.13	7.349	7.546	5.959	6.007	8.565	2.756	5.936	5.445	5.709	4.83	6.844	6.195	5.691
2/7/2008	12:00	7.125	4.845	2.378	6.139	7.349	7.548	5.964	6.01	8.574	2.768	5.938	5.443	5.726	4.846	6.851	6.205	5.695
2/7/2008	16:00	7.122	4.845	2.376	6.139	7.355	7.553	5.967	6.024	8.572	2.825	5.96	5.452	5.776	4.888	6.855	6.207	5.703
2/7/2008	20:00	7.135	4.841	2.378	6.141	7.362	7.559	5.967	6.024	8.565	2.821	5.95	5.454	5.774	4.874	6.851	6.207	5.706
2/8/2008	0:00	7.137	4.843	2.386	6.145	7.363	7.563	5.969	6.026	8.574	2.87	5.953	5.454	5.818	4.907	6.857	6.207	5.736
2/8/2008	4:00	7.137	4.838	2.382	6.145	7.363	7.565	5.964	6.026	8.563	2.918	5.952	5.452	5.876	4.945	6.857	6.211	5.774
2/8/2008	8:00	7.135	4.83	2.372	6.143	7.357	7.561	5.957	6.022	8.561	2.939	5.954	5.448	5.913	4.962	6.853	6.207	5.823
2/8/2008	12:00	7.137	4.824	2.368	6.153	7.355	7.565	5.959	6.026	8.577	2.865	5.961	5.423	5.837	4.876	6.863	6.212	5.759
2/8/2008	16:00	7.137				7.363	7.571	5.962	6.031		2.855						6.207	5.747

Supplement 4:

Quality Control for Sample Collection, Handling, and Analysis

Supplement 4:

Quality Control for Sample Collection, Handling, and Analysis during the 2007 Investigation at Powhattan, Kansas

Soil and groundwater sampling was conducted at Powhattan, Kansas, in three field sessions during July-August 2007, to complete the scope of work presented in the site-specific *Work Plan* (Argonne 2007). The QA/QC procedures followed during sample collection, handling, and analysis are described in detail in the *Master Work Plan* (Argonne 2002) and the site-specific *Work Plan* (Argonne 2007).

The following sections discuss the quality of the analytical data generated during the investigation. Evaluation of the organic analytical data was consistent with regulatory guidelines (EPA 1994).

S4.1 Sampling to Monitor Sampling Collection, Handling, and Analysis Procedures

Sample collection and handling activities were monitored by the documentation of samples as they were collected and the use of chain-of-custody (COC) forms and custody seals to ensure sample integrity during handling and shipment. The QA/QC samples collected included a field blank, equipment rinsates, and trip blanks. As a measure of analytical precision, field replicate samples were collected, and other samples were selected for duplicate analyses. Selected soil and groundwater samples were shipped to secondary laboratories for verification organic analyses.

The QA/QC samples are listed in Table S4.1. Analytical results for carbon tetrachloride, chloroform, and methylene chloride in QA/QC samples collected to monitor sample collection and handling activities are in Table S4.2.

S4.1.1 Field Blank

One field blank was collected to represent water used for equipment decontamination and well installation. carbon tetrachloride was not detected in the field blank. Chloroform was detected at a low concentration.

S4.1.2 Equipment Rinsates

Seven equipment rinsates were collected to monitor decontamination procedures for reusable sampling equipment. Contaminants of concern were not detected in the rinsate samples, indicating that cross-contamination did not occur during collection of groundwater samples.

S4.1.3 Trip Blanks

As an indicator of cross-contamination of samples during shipment, 30 trip blanks were prepared and shipped with soil or water samples to laboratories for organic analyses. The total included 11 water trip blanks and 12 soil trip blanks sent to the AGEM Laboratory at Argonne, Illinois; 4 water trip blanks sent to Envirosystems, Inc., in Columbia, Maryland; 2 soil trip blanks sent to TestAmerica Laboratories (formerly Severn-Trent Laboratories, Inc.), in Colchester, Vermont; and 1 water trip blank sent to Pace Analytical Services in Lenexa, Kansas. Analytical results indicate that sample-handling procedures were followed and that cross-contamination of samples did not occur during shipment.

The field record (logbook #1, page 192) indicates that soil trip blank PHQCTB-S-24682 was prepared for shipment to the AGEM Laboratory on August 1, 2007, with vertical-profile soil samples collected at location TI07 and listed on COC 3976; however, the trip blank was not recorded as received with the shipment at the AGEM Laboratory. The soil samples from location TI07 were free of contamination, indicating that cross-contamination did not occur during shipment.

S4.1.4 Replicate Samples, Duplicate Analyses, and Verification Analyses

As an indicator of the consistency of the sampling methodology followed and to provide a measure of analytical precision, replicate soil and groundwater samples were collected, and other samples were selected by the AGEM Laboratory for duplicate organic analyses. In addition, selected soil and groundwater samples were submitted for verification organic analysis at a secondary laboratory. Replicate samples, samples selected for duplicate analyses, and samples selected for verification organic analysis are listed in Table S4.1.

S4.1.5 Field Evaluation Samples

Analytical results for two groundwater samples collected from newly installed piezometers for field evaluation purposes (Table S4.1) are excluded from the investigation's official data set. These results are for samples from newly installed monitoring wells MW11 and MW12, which were initially sampled on August 1-2, 2007, prior to well development. The field evaluation samples were submitted for overnight analysis. The results were useful for characterizing site contamination during the field program and aided in the selection of locations for additional monitoring wells. Nevertheless, the results cannot be considered representative of site conditions and thus are not reported in this document. The complete monitoring well network, including the seven new wells installed during the 2007 investigation (MW11-MW17), was sampled at the conclusion of the field program on August 22-23, 2007, according to the monitoring well purging and sampling procedures outlined in the *Master Work Pla*n (Argonne 2002). Those results are reported as the official data set.

S4.1.6 Waste Characterization Samples

Wastewater generated during investigation activities was placed in containers and stored on the site. To determine the appropriate method for disposal, two composite samples were collected for VOCs and nitrate analyses by Pace Analytical Services. On the basis of the analytical results (Table S4.2), the wastewater generated during the 2007 investigation was accepted for disposal without treatment at the Sabetha Publicly Owned Treatment Works (Sabetha 2007a,b).

S4.2 Quality Control for Organic Analyses of Soil and Water Samples at the AGEM Laboratory

To investigate site contamination, vertical-profile subsurface soil sampling was conducted at 13 locations. A total of 196 soil samples were collected. In addition, 11 replicate samples were collected for QC purposes. The subsurface soil samples were analyzed at the AGEM Laboratory for VOCs, including carbon tetrachloride, chloroform, and methylene chloride, by using a modification of EPA Method 8260B (the purge-and-trap method), as referenced in the EPA's SW-846 (EPA 2004), to achieve a quantitation limit of 10 μg/kg.

Soil samples were quick-frozen on dry ice as they were collected. At the laboratory, the VOCs present in each soil sample were extracted with methanol from the sample matrix. For the purge-and-trap soil analyses, an aliquot of the methanol extract was purged, and the volatile species were transferred to a sorbent tube. After purging, the sorbent tube was heated and backflushed with an inert gas to desorb the components into the gas chromatograph-mass spectrometer (GC-MS) system.

In vertical-profile groundwater sampling at 45 locations (TI01-TI45), 53 groundwater samples were collected. Groundwater samples were also collected from the 10 previously existing KDHE monitoring wells (KDHEP-1, KDHEP-2, KDHEP-3 and MW4-MW10), the 7 monitoring wells installed by the CCC/USDA as part of the 2007 investigation (MW11-MW17), and 3 private wells (Kickapoo, Smith, and Schuetz). Seven additional replicate samples were collected for QC purposes. The groundwater samples were analyzed at the AGEM Laboratory with EPA Method 524.2 (EPA 2004) to achieve a quantitation limit of 1.0 μg/L.

Water samples shipped to the AGEM Laboratory were analyzed by the purge-and-trap method with a GC-MS system. For the purge-and-trap analyses, the VOCs present in the groundwater sample were extracted (purged) from the sample matrix by bubbling an inert gas through the sample. The purged components were trapped in a sorbent tube. After purging, the sorbent tube was heated and backflushed with an inert gas to desorb the components into the GC-MS system.

For both the soil and water analyses, the compounds eluting from the GC column were identified by retention time and by comparison with reference library spectra. The concentration of each component was calculated by comparison of the MS response for the quantitation ion to

corresponding calibration curves, the response for internal standards, or both. The internal standard recovery limits were 80-120%. Calibration checks with each sample delivery group (SDG) were required to be within ±20% of the standard.

Samples submitted to the AGEM Laboratory for organic analysis were analyzed in 26 SDGs, as shown in Table S4.3. The QA/QC procedures followed included analysis of instrument calibration check standards, analysis of laboratory blanks, monitoring of surrogate spike recovery, and duplicate laboratory analyses. Significant results include the following:

- Samples shipped to the AGEM Laboratory were received with custody seals intact and at the appropriate temperature. The outer custody seal on a shipment of four water samples received at the AGEM Laboratory on August 4, 2007, was broken, but the inner seal was intact, per information recorded on COC 3979. All samples were analyzed within required holding times.

- Carbon tetrachloride, chloroform, and methylene chloride, contaminants of concern in the investigation, were not detected in laboratory method blanks analyzed with the samples.

- For each SDG, analytical instrument calibration was monitored by the analysis of calibration check standards. Table S4.3 shows the relative percent difference (RPD) values between the known and calculated concentrations of the standards. The concentrations of calibration check standards measured in all SDGs were within the acceptable range of ±20%.

- Surrogate standard determinations were performed on samples and blanks by using surrogate spike compounds fluorobenzene, 1,4-dichlorobenzene-d_4, and bromofluorobenzene. Table S4.3 shows the percent recovery of these system-monitoring compounds for each of the analyses. For all samples, the surrogate recoveries were within the specified range of 80-120%, in either the initial analysis or a successful reanalysis.

- Dual analyses of soil and groundwater samples were conducted at the AGEM Laboratory as a measure of the consistency in the sampling and analytical methodologies. The dual analyses were accomplished through analysis of

replicate samples submitted to the laboratory or duplicate analyses of samples selected by the laboratory. Table S4.4 summarizes the analytical results for carbon tetrachloride and chloroform in the primary samples and the associated secondary QC analyses. Consistency in both the sampling and analytical methodologies is indicated.

The analytical data from the AGEM Laboratory are acceptable for quantitative determination of contaminant distribution.

S4.3 Quality Control for Verification Organic Analysis of Soil Samples by TestAmerica Laboratories

In accordance with the QA/QC procedures defined in the *Master Work Plan* (Argonne 2002), selected soil samples analyzed at the AGEM Laboratory for VOCs with EPA Method 8260B were subjected to verification analysis at a second laboratory with the same analytical procedure. Of the 196 vertical-profile soil samples analyzed at the AGEM Laboratory, 19 (10% of the total) were also analyzed by TestAmerica. The results were reported in 2 SDGs. The quality of the organic analytical data from TestAmerica is discussed below.

The QA/QC procedures followed included initial and continuing calibration of instruments, analysis of laboratory blanks, monitoring of surrogate spike recovery, and analyses of laboratory QC samples. Significant results include the following:

- Soil samples shipped to TestAmerica were received with custody seals intact and at the appropriate temperature. All samples were analyzed within required holding times.

- Carbon tetrachloride, the primary contaminant of concern in the investigation, was not detected in the two methanol blanks and two instrument blanks analyzed in association with the samples. Relatively high concentrations of acetone, 2-butanone, and 1,1,1-trichloroethane were identified in the analysis of one methanol blank, as were trace concentrations of chloroform, naphthalene, and 1,2,3-trichlorobenzene. Trace concentrations of 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, and 1,2,3-trichlorobenzene were identified in the associated instrument blank. For

comparison, the analysis of the second methanol blank was free of acetone and chloroform, although trace concentrations of several compounds were identified as constituents. These included methyl iodide, bromomethane, chloromethane, trichlorobenzene, dichlorobenzene, *m*,*p*-xylene, and naphthalene. The associated instrument blank was free of contamination.

- Surrogate standard determinations were performed on samples and blanks by using the surrogate spike compounds 1,2-dichloroethane-d_4, toluene-d_8, bromofluorobenzene, and 1,2-dichlorobenzene-d_4. Table S4.5 shows the percent recovery of the system-monitoring compounds for each of the analyses. With one exception, the recovery of surrogate compounds was within the target range. Low recovery is noted in the analysis of sample PHTI02-S-24100; the result is qualified.

- To evaluate the matrix effect of samples on the analytical methodology, laboratory QC samples containing a suite of spike compounds including carbon tetrachloride and chloroform were analyzed with the SDGs. Table S4.6 shows the percent recovery of these compounds in the spiked analyses. The QC limits for carbon tetrachloride and chloroform were met.

Analytical results for soil samples analyzed at the AGEM Laboratory with EPA Method 8260B are supported by the analytical results obtained by TestAmerica with the same analytical method. The verification organic results for contaminants of concern in the soil samples are summarized in Table S4.7. High carbon tetrachloride concentrations (above the KDHE's RBSL of 200 µg/kg for soil-to-groundwater protection pathway) were verified in the analyses of samples from locations TI01 and TI02 by both laboratories. Lower concentrations (or no contamination) were found in samples from other locations that were analyzed by both laboratories.

S4.4 Quality Control for Verification Organic Analysis of Groundwater Samples by Envirosystems, Inc.

In accordance with the QA/QC procedures defined in the *Master Work Plan* (Argonne 2002), the analyses of water samples at the AGEM Laboratory with EPA Method 524.2 were verified by a second laboratory using EPA-defined CLP methodology. Of the 73 groundwater

samples collected as part of the investigation and analyzed at the AGEM Laboratory, 8 (10% of the total) were also analyzed according to CLP methodology by Envirosystems. The results were reported in 4 SDGs. The quality of the organic analytical data obtained by using CLP methodology is discussed below.

The QA/QC procedures followed in the CLP analysis included initial and continuing calibration of instruments, analysis of laboratory blanks, and monitoring of surrogate spike recovery. Significant results include the following:

- Samples shipped to the CLP laboratory were received with custody seals intact and at the appropriate temperature. All samples were analyzed within required holding times.

- Analytical instruments were properly tuned; initial and continuing calibration checks remained within the allowable range for all contaminants of interest.

- Carbon tetrachloride and chloroform were not detected in the associated laboratory method blanks. Methylene chloride was detected at a trace concentration in the blank associated with one SDG.

- Surrogate standard determinations were performed on samples and blanks by using the surrogate spike compounds toluene-d_8, bromofluorobenzene, and 1,1-dichloroethene-d_4. Table S4.8 shows the percent recovery of the system-monitoring compounds for each of the verification organic analyses. The recoveries of the surrogate spikes were within the acceptable ranges (identified in Table S4.8) specific to each surrogate.

Analytical results for groundwater samples analyzed at the AGEM Laboratory with EPA Method 524.2 are supported by the analytical results obtained by Envirosystems with EPA CLP methodology. The verification organic results in the groundwater samples are summarized in Table S4.9. Samples analyzed at the AGEM Laboratory with no detection of contamination were analyzed at the CLP laboratory with similar results. Because of the higher quantitation limit of 5.0 µg/L for the CLP analysis, very low concentrations detected by purge-and-trap analysis at the AGEM Laboratory were sometimes not detected by CLP analysis. For samples with contaminant

concentrations above the purge-and-trap quantitation limit of 1.0 µg/L, the RPD for carbon tetrachloride ranged from 0% to 36%, and the RPD for chloroform ranged from 0% to 26%.

S4.5 Quality Control for Analyses of Soil Samples for Physical Properties by the HWS Laboratory

To aid in evaluation of site lithology, soil samples were selected during coring activities for analyses of several physical properties at the HWS Laboratory in Lincoln, Nebraska. Particle size analysis was conducted in accordance with ASTM D422-63 (2002), *Method for Particle-Size Analysis of Soils*. The distribution of particle sizes larger than 75 µm was determined by sieving, while the distribution of smaller particle sizes was determined by a sedimentation process using a hydrometer. The specific gravity analysis was conducted by using ASTM D 854-92, *Standard Test Method for Specific Gravity of Soils*. The moisture content was determined according to ASTM D2216-92, *Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock*. The ASTM standards are available online (http://www.astm.org/).

S4.6 Quality Control for Organic and Nitrate Analyses of Waste Characterization Samples by Pace Analytical Services, Inc.

Two wastewater samples were analyzed by Pace Analytical Services, Inc., Lenexa, Kansas. The methods used were as follows: VOCs, EPA Method 8260; 1,2-dibromoethane, EPA Method 504.1; and nitrate, EPA Method 300. The associated method blanks were free of contamination. The recoveries of the contaminants of concern in laboratory QC samples were within specified method limits.

TABLE S4.1 Quality control samples collected to monitor sample collection, handling, and analysis activities during the 2007 investigation at Powhattan, Kansas

Location	Sample	Depth (ft)	Sampling Date	Sample Description
Field blank				
QC	PHGW-W-24683	–	8/1/07	Field blank of water used during the 2007 investigation, collected from a hydrant at the north end of the co-op office. Water source is Brown County RWD.
Equipment rinsates				
QC	PHQCBR-W-24062	–	7/9/07	Rinsate of decontaminated sampling bailer after collection of sample PHTI02-W-24061.
QC	PHQCBR-W-24174	–	7/14/07	Rinsate of decontaminated sampling bailer after collection of sample PHTI16-W-24176.
QC	PHTI27R-W-24284	–	7/26/07	Rinsate of decontaminated sampling bailer after collection of sample PHTI27-W-24283.
QC	PHTI20R-W-24252	–	7/29/07	Rinsate of decontaminated sampling bailer after collection of sample PHTI20-W-24251.
QC	PHQCBR-W-24354	–	7/30/07	Rinsate of decontaminated sampling bailer after collection of sample PHTI34-W-24353.
QC	PHQCBR-W-24686	–	8/2/07	Rinsate of decontaminated sampling bailer after collection of sample PHTI44-W-24685.
QC	PHQCIR4-W-24679	–	8/23/07	Equipment rinsate prior to collection of sample PHSCHUETZ-W-24700.
Trip blanks				
QC	PHQCTB-S-24091	–	7/10/07	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COCs 2243 and 2248.
QC	PHQCTB-W-24089	–	7/10/07	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COC 2247.
QC	PHQCTB-S-24120	–	7/11/07	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COCs 2251 and 2250.
QC	PHQCTB-S-24141	–	7/12/07	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COCs 2253 and 3922.
QC	PHQCTB-W-24140	–	7/12/07	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COCs 3938 and 2255.
QC	PHQCTB-S-24170	–	7/13/07	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COC 3923.
QC	PHQCTB-W-24175	–	7/14/07	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COC 3924.
QC	PHQCTB-W-24223	–	7/16/07	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COCs 3927, 3934, and 3935.
QC	PHQCTB-S-24260	–	7/16/07	Trip blank with soil samples to the AGEM Laboratory for organic analyses listed on COCs 3928, 3932, 3933, and 3939.
QC	PHQCTB-W-24261	–	7/16/07	Trip blank sent to Envirosystems for verification organic analysis with water samples listed on COC 3972.

TABLE S4.1 (Cont.)

Location	Sample	Depth (ft)	Sampling Date	Sample Description
Trip blanks (cont.)				
QC	PHQCTB-S-24143	–	7/17/07	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COC 3940.
QC	PHQCTB-W-24145	–	7/17/07	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COCs 3941 and 3942.
QC	PH-MEOHBLK-072407	–	7/24/07	Trip blank sent to Severn-Trent for verification organic analysis with soil samples listed on COC 3438.
QC	PHQCTB-S-24269	–	7/26/07	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COCs 3945 and 3946.
QC	PHTI28T-W-24286	–	7/26/07	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COC 3944.
QC	PHQCTB-S-24302	–	7/27/07	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COCs 3948 and 3949.
QC	PHTB-W-24290	–	7/27/07	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COCs 3951.
QC	PHTB2-W-24299	–	7/28/07	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COC 3952.
QC	PHQCTB-S-24250	–	7/28/07	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COCs 3954 and 3950.
QC	PHQCTB-S-24355	–	7/30/07	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COCs 3963, 3957, 3975, and 3959.
QC	PHTB3-W-24255	–	7/30/07	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COCs 3968 and 3960.
QC	PHQCTB-W-24356	–	7/30/07	Trip blank sent to Envirosystems for verification organic analysis with water samples listed on COC 3967.
QC	PHQCTB-S-24682	–	8/1/07	Trip blank sent to the AGEM Laboratory for organic analyses with soil samples listed on COCs 3976 and 3974. Not included in shipment, per J. Alvarado, AGEM Laboratory.
QC	PHQCTB-W-24681	–	8/1/07	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COCs 3977 and 3971.
QC	PHQCTB-W-24689	–	8/2/07	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COC 3980.
QC	PHTB4-W-24692	–	8/3/07	Trip blank sent to the AGEM Laboratory for organic analyses with water samples listed on COC 3979.
QC	PHQCTB-W-24697	–	8/3/07	Trip blank sent to Envirosystems for verification organic analysis with water samples listed on COC 3978.

TABLE S4.1 (Cont.)

Location	Sample	Depth (ft)	Sampling Date	Sample Description
Trip blanks (cont.)				
QC	PHTB-03Aug07	–	8/3/07	Trip blank sent to Pace Analytical with wastewater sample PHWW-03Aug07.
QC	PH-MEOHBLK-080907	–	8/9/07	Trip blank sent to Severn-Trent for verification organic analysis with soil samples listed on COC 3439.
QC	PHQCTB-W-24703	–	8/23/07	Trip blank sent to the AGEM Laboratory for organic analysis with water samples listed on COCs 3981 and 3982.
QC	PHQCTB-W-24703b	–	8/23/07	Trip blank sent to Envirosystems for verification organic analysis with water sample listed on COC 3983.
Replicate samples				
TI01	PHTI01-S-24076	22	7/10/07	Replicate of cone penetrometer vertical-profile subsurface soil sample PHTI01-S-24075.
TI02	PHTI02-S-24108	54	7/11/07	Replicate of cone penetrometer vertical-profile subsurface soil sample PHTI02-S-24107.
TI04	PHTI04-S-24155	46	7/13/07	Replicate of cone penetrometer vertical-profile subsurface soil sample PHTI04-S-24154.
TI04	PHTI04-W-24131	60.4-65.4	7/12/07	Replicate of cone penetrometer vertical-profile groundwater sample PHTI04-W-24130.
TI05	PHTI05-S-24232	26	7/16/07	Replicate of cone penetrometer vertical-profile subsurface soil sample PHTI05-S-24231.
TI06	PHTI06-S-24185	26	7/15/07	Replicate of cone penetrometer vertical-profile subsurface soil sample PHTI06-S-24184.
TI07	PHTI07-S-24663	34	7/31/07	Replicate of cone penetrometer vertical-profile subsurface soil sample PHTI07-S-24662.
TI08	PHTI08-S-24332	50	7/29/07	Replicate of cone penetrometer vertical-profile subsurface soil sample PHTI08-S-24331.
TI08	PHTI08-W-24295	56-61	7/28/07	Replicate of cone penetrometer vertical-profile groundwater sample PHTI08-W-24294.
TI09	PHTI09-S-24202	18	7/15/07	Replicate of cone penetrometer vertical-profile subsurface soil sample PHTI09-S-24201.
TI10	PHTI10-S-24169	42	7/27/07	Replicate of cone penetrometer vertical-profile subsurface soil sample PHTI10-S-24168.
TI11	PHTI11-S-24249	26	7/26/07	Replicate of cone penetrometer vertical-profile subsurface soil sample PHTI11-S-24248.
TI18	PHTI18-S-24344	38	7/30/07	Replicate of cone penetrometer vertical-profile subsurface soil sample PHTI18-S-24343.
TI23	PHTI23-W-24282	60.5-65.5	7/26/07	Replicate of cone penetrometer vertical-profile groundwater sample PHTI23-W-24281.
TI25	PHTI25-W-24292	60-65	7/27/07	Replicate of cone penetrometer vertical-profile groundwater sample PHTI25-W-24291.
MW4	PHQCDUP-W-24163	54.7-64.7	7/13/07	Replicate of monitoring well sample PHMW4-W-24162.
MW5	PHQCDUP-W-24161	58-68	7/13/07	Replicate of monitoring well sample PHMW5-W-24160.
Kickapoo	PHKICKAPOODUP-W-24702	Unknown	8/23/07	Replicate of private well sample PHKICKAPOO-W-24701.
Samples selected for duplicate organic analyses at the AGEM Laboratory				
TI01	PHTI01-S-24082	42	7/10/07	Vertical-profile subsurface soil sample.
TI01	PHTI01-W-24060	59.5-64.5	7/9/07	Cone penetrometer groundwater sample.

TABLE S4.1 (Cont.)

Location	Sample	Depth (ft)	Sampling Date	Sample Description
Samples selected for duplicate organic analyses at the AGEM Laboratory (cont.)				
TI02	PHTI02-S-24097	18	7/11/07	Vertical-profile subsurface soil sample.
TI03	PHTI03-S-24111	2	7/11/07	Vertical-profile subsurface soil sample.
TI04	PHTI04-S-24156	48.75	7/13/07	Vertical-profile subsurface soil sample.
TI04	PHTI04-W-24158	55-60	7/13/07	Cone penetrometer groundwater sample.
TI06	PHTI06-S-24183	22	7/15/07	Vertical-profile subsurface soil sample.
TI06	PHTI06-S-24188	37.5	7/15/07	Vertical-profile subsurface soil sample.
TI07	PHTI07-S-24358	6	7/31/07	Vertical-profile subsurface soil sample.
TI08	PHTI08-S-24329	42	7/29/07	Vertical-profile subsurface soil sample.
TI08	PHTI08-W-24295	56-61	7/28/07	Cone penetrometer groundwater sample.
TI09	PHTI09-S-24206	31	7/16/07	Vertical-profile subsurface soil sample.
TI10	PHTI10-S-24301	50	7/27/07	Vertical-profile subsurface soil sample.
TI11	PHTI11-S-24249	26	7/26/07	Vertical-profile subsurface soil sample.
TI12	PHTI12-S-24315	42	7/28/07	Vertical-profile subsurface soil sample.
TI12	PHTI12-S-24316	46	7/28/07	Vertical-profile subsurface soil sample.
TI13	PHTI13-W-24144	61.1-66.1	7/17/07	Cone penetrometer groundwater sample.
TI18	PHTI18-S-24336	10	7/29/07	Vertical-profile subsurface soil sample.
TI18	PHTI18-S-24343	38	7/30/07	Vertical-profile subsurface soil sample.
TI23	PHTI23-W-24282	60.5-65.5	7/26/07	Cone penetrometer groundwater sample.
TI34	PHTI34-W-24353	62.26-67.26	7/30/07	Cone penetrometer groundwater sample.
TI39	PHTI39-W-24691	53.5-58.5	8/3/07	Cone penetrometer groundwater sample.
TI44	PHTI44-W-24685	59.1-64.1	8/2/07	Cone penetrometer groundwater sample.
MW9	PHMW9-W-24067	52-62	7/9/07	Monitoring well groundwater sample.
MW12	PHMW12-W-24677	50.3-60.3	8/23/07	Monitoring well groundwater sample.
Groundwater samples submitted for verification organic analysis by Envirosystems, Inc.				
TI08	PHTI08-W-24294	56-61	7/28/07	Cone penetrometer groundwater sample at southeast corner of co-op grain storage building on former CCC/USDA property.
TI09	PHTI09-W-24196	57.6-62.6	7/15/07	Replicate of cone penetrometer groundwater sample PHTI09-W-24195 collected for verification organic analysis.
TI09	PHTI09-W-24195	57.6-62.6	7/15/07	Cone penetrometer groundwater sample at south side of co-op grain storage building, in front of door. Turbid, silty.
TI27	PHTI27-W-24283	54.7-59.7	7/26/07	Cone penetrometer groundwater sample east of Center Street, directly southeast of southwest corner of co-op grain storage building.
TI36	PHTI36-W-24351	57.7-62.7	7/30/07	Replicate of cone penetrometer groundwater sample PHTI36-W-24349 for verification organic analysis.

TABLE S4.1 (Cont.)

Location	Sample	Depth (ft)	Sampling Date	Sample Description
Groundwater samples submitted for verification organic analysis by Envirosystems, Inc. (cont.)				
TI36	PHTI36-W-24349	57.7-62.7	7/30/07	Cone penetrometer groundwater sample at northeast corner of alley at First and Center Street. Slightly silty.
TI41	PHTI41-W-24696	63.56-68.56	8/3/07	Replicate of cone penetrometer groundwater sample PHTI41-W-24695 for verification organic analysis.
TI41	PHTI41-W-24695	63.56-68.56	8/3/07	Cone penetrometer groundwater sample, west of northernmost co-op building. Silty.
KDHEP-2	PHKDHEP2-W-24165	58.1-68.1	7/14/07	Groundwater sample from existing KDHE monitoring well.
MW6	PHMW6-W-24164	56-66	7/14/07	Groundwater sample from existing KDHE monitoring well.
MW11	PHMW11-W-24676	55.5-65.5	8/23/07	Groundwater sample from new monitoring well.
Vertical-profile subsurface soil samples submitted for verification organic analysis by TestAmerica				
TI01	PHTI01-S-24071	6	7/10/07	Northeast corner of former CCC/USDA property, adjacent to KDHEP1, south side of well.
TI01	PHTI01-S-24082	42	7/10/07	
TI02	PHTI02-S-24093	6	7/11/07	Former CCC/USDA property, northeast corner of concrete apron on north side of co-op grain storage building.
TI02	PHTI02-S-24100	30	7/11/07	
TI03	PHTI03-S-24114	14	7/11/07	Northeast corner of former CCC/USDA property.
TI03	PHTI03-S-24117	26	7/12/07	
TI04	PHTI04-S-24154	46	7/13/07	Northwest boundary of former CCC/USDA property.
TI05	PHTI05-S-24231	26	7/16/07	Northwest corner of co-op grain storage building.
TI05	PHTI05-S-24234	33.7	7/17/07	
TI06	PHTI06-S-24182	18	7/15/07	Northeast corner of co-op grain storage building on former CCC/USDA property.
TI06	PHTI06-S-24190	43	7/15/07	
TI07	PHTI07-S-24665	42	7/31/07	West side of former CCC/USDA property.
TI08	PHTI08-S-24320	6	7/28/07	Southeast corner of co-op grain storage building on former CCC/USDA property.
TI08	PHTI08-S-24326	30	7/29/07	
TI09	PHTI09-S-24201	18	7/15/07	South door of co-op grain storage building, former CCC/USDA property.
TI10	PHTI10-S-24167	38	7/27/07	Southwest corner of co-op grain storage building on former CCC/USDA property.
TI11	PHTI11-S-24266	46	7/26/07	West boundary of former CCC/USDA property.
TI12	PHTI12-S-24313	34	7/28/07	South of driveway, adjacent to drainage ditch
TI18	PHTI18-S-24343	38	7/30/07	Northeast of former CCC/USDA property.

TABLE S4.1 (Cont.)

Location	Sample	Depth (ft)	Sampling Date	Sample Description
Waste characterization samples				
QC	PHWW-03Aug07	–	8/3/07	Composite sample of wastewater generated during sampling and monitoring well installation and development, July 10-August 3, 2007.
QC	PHWW-05Sep07	–	9/5/07	Composite sample of wastewater generated during monitoring well sampling on August 22-23, 2007.
Field evaluation samples				
MW11	PHMW11-W-24669	55.5-65.5	8/1/07	New piezometer approximately 10 ft east of TI04 profile location. Field evaluation sample collected prior to development of well. Slightly turbid.
MW12	PHMW12-W-24687	50.3-60.3	8/2/07	New piezometer in northwest portion of former CCC/USDA property. Field evaluation sample collected prior to development of well. Slightly silty.

TABLE S4.2 Results for quality control samples analyzed to monitor sample collection and handling activites during the 2007 investigation at Powhattan, Kansas.

Sample	Sampling Date	Medium	Analysis Date	EPA Analytical Method	Laboratory[a]	Concentration (µg/kg in soil; µg//L in water) Carbon Tetrachloride	Chloroform	Methylene Chloride	Ethylene Dibromide	Quantitation Limit	Nitrate (mg/L)
Field blank											
PHGW-W-24683	8/1/07	Water	8/2/07	524.2	AGEM	ND[b]	3.7	ND	ND	1.0	–
Equipment rinsates											
PHQCBR-W-24062	7/9/07	Water	7/11/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHQCBR-W-24174	7/14/07	Water	7/17/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHTI27R-W-24284	7/26/07	Water	7/27/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHTI20R-W-24252	7/29/07	Water	7/31/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHQCBR-W-24354	7/30/07	Water	7/31/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHQCBR-W-24686	8/2/07	Water	8/3/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHQCIR4-W-24679	8/23/07	Water	8/24/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
Trip blanks											
PHQCTB-S-24091	7/10/07	Soil	7/12/07	SW8260B	AGEM	ND	ND	ND	ND	10	–
PHQCTB-W-24089	7/10/07	Water	7/11/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHQCTB-S-24120	7/11/07	Soil	7/13/07	SW8260B	AGEM	ND	ND	ND	ND	10	–
PHQCTB-S-24141	7/12/07	Soil	7/18/07	SW8260B	AGEM	ND	ND	ND	ND	10	–
PHQCTB-W-24140	7/12/07	Water	7/17/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHQCTB-S-24170	7/13/07	Soil	7/18/07	SW8260B	AGEM	ND	ND	ND	ND	10	–
PHQCTB-W-24175	7/14/07	Water	7/16/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHQCTB-S-24260	7/16/07	Soil	7/23/07	SW8260B	AGEM	ND	ND	ND	ND	10	–
PHQCTB-W-24223	7/16/07	Water	7/17/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHQCTB-W-24261	7/16/07	Water	7/18/07	SW8260	ENVSYS	ND	ND	ND	ND	5.0	–
PHQCTB-S-24143	7/17/07	Soil	7/24/07	SW8260B	AGEM	ND	ND	ND	ND	10	–
PHQCTB-W-24145	7/17/07	Water	7/20/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PH-MEOHBLK-072407	7/24/07	Soil	8/3/07	SW8260B	TA	ND	ND	ND	ND	10	–
PHQCTB-S-24269	7/26/07	Soil	7/30/07	SW8260B	AGEM	ND	ND	ND	ND	10	–
PHTI28T-W-24286	7/26/07	Water	7/27/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHQCTB-S-24302	7/27/07	Soil	7/31/07	SW8260B	AGEM	ND	ND	ND	ND	10	–
PHTB-W-24290	7/27/07	Water	7/30/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHQCTB-S-24250	7/28/07	Soil	8/1/07	SW8260B	AGEM	ND	ND	ND	ND	10	–
PHTB2-W-24299	7/28/07	Water	7/30/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHQCTB-S-24355	7/30/07	Soil	8/6/07	SW8260B	AGEM	ND	ND	ND	ND	10	–
PHQCTB-W-24356	7/30/07	Water	8/1/07	SW8260	ENVSYS	ND	ND	ND	ND	5.0	–
PHTB3-W-24255	7/30/07	Water	7/31/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHQCTB-W-24681	8/1/07	Water	8/2/07	524.2	AGEM	ND	ND	ND	ND	1.0	–

TABLE S4.2 (Cont.)

Sample	Sampling Date	Medium	Analysis Date	EPA Analytical Method	Laboratory[a]	Concentration (µg/kg in soil; µg//L in water) Carbon Tetrachloride	Chloroform	Methylene Chloride	Ethylene Dibromide	Quantitation Limit	Nitrate (mg/L)
Trip blanks (cont.)											
PHQCTB-S-24682	8/1/07	Soil	–	SW8260B	AGEM	NA	NA	NA	NA	10	–
PHQCTB-W-24689	8/2/07	Water	8/3/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHQCTB-W-24697	8/3/07	Water	8/9/07	SW8260	ESIC	ND	ND	1.3 J B[d]	ND	5.0	–
PHTB-03Aug07	8/3/07	Water	8/7/07	SW8260	PAS	ND	ND	ND	ND	1.0	–
PHTB4-W-24692	8/3/07	Water	8/7/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PH-MEOHBLK-080907	8/9/07	Soil	8/16/07	SW8260B	TA	ND	15 J	ND	ND	20	–
PHQCTB-W-24703	8/23/07	Water	8/24/07	524.2	AGEM	ND	ND	ND	ND	1.0	–
PHQCTB-W-24703b	8/23/07	Water	8/28/07	SW8260	ESIC	ND	ND	ND	ND	5.0	–
Waste characterization samples											
PHWW-03Aug07	8/3/07	Water	8/7/07	SW8260	PAS	ND	ND	ND	ND	1.0	9.2
PHWW-05Sep07	9/5/07	Water	9/7/07	SW8260	PAS	ND	ND	ND	ND	1.0	26.9

[a] Laboratories: AGEM, AGEM Laboratory, Argonne, Illinois; ENVSYS, Envirosystems, Inc., Columbia, Maryland; PAS, Pace Analytical Services, Lenexa, Kansas; TA, TestAmerica Laboratories, Colchester, Vermont.

[b] ND, contaminant not detected.

[c] NA, trip blank not received by the AGEM Laboratory and therefore not analyzed.

[d] Qualifier J indicates a concentration below the indicated quantitation limit; qualifier B indicates that the contaminant was found in the blank.

TABLE S4.3 Calibration and surrogate recovery data for organic analyses of soil and water samples at the AGEM Laboratory.

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-7-11, analysis date July 11, 2007									
20-ppb standard	100	102	101	23.22	14.9	22.91	13.6	23.79	17.3
Laboratory blank	100	100	100						
PHTI01-W-24060	109	108	110	Outside calibration range for carbon tetrachloride at zero dilution (dilution factor [DF] 1).					
PHTI02-W-24061	109	108	111						
PHQCBR-W-24062	104	108	107						
PHTI03-W-24063	102	106	106						
PHMW10-W-24064	108	99	104						
PHKDHEP1-W-24065	103	97	100	Outside calibration range for carbon tetrachloride at DF 1.					
PHMW8-W-24066	94	97	97						
PHMW9-W-24067	98	94	93						
PHMW9-W-24067DUP	99	92	93						
PHQCTB-W-24089	95	89	87						
PHKDHEP1-W-24065	95	97	95	Analysis at DF 10 for carbon tetrachloride and chloroform.					
PHTI01-W-24060	97	93	101	Analysis at DF 10 for carbon tetrachloride and chloroform.					
PHTI01-W-24060DUP	96	97	95	Analysis at DF 10 for carbon tetrachloride and chloroform.					
SDG 07-7-12, analysis date July 12, 2007									
20-ppb standard	100	100	100	19.06	4.8	18.25	9.2	18.21	9.4
Laboratory blank	90	87	89						
PHTI01-S-24073	103	98	101						
PHTI01-S-24078	103	103	103						
PHTI01-S-24075	106	106	112						
PHTI01-S-24080	101	102	101						
PHTI01-S-24076	102	98	97						
PHTI01-S-24086	106	95	99						
PHTI01-S-24079	99	94	96						
PHTI01-S-24083	102	94	97						
PHTI01-S-24081	97	90	92						

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-7-12, analysis date July 12, 2007 (cont.)									
PHTI01-S-24082	95	92	93						
PHTI01-S-24082DUP	96	91	92						
PHTI01-S-24070	99	94	94						
PHTI01-S-24074	97	94	98						
PHTI01-S-24072	101	100	100						
PHTI01-S-24077	102	99	102						
PHTI01-S-24085	102	105	101						
PHTI01-S-24084	109	111	109						
PHTI01-S-24087	108	112	109						
PHTI01-S-24088	106	104	106						
PHQCTB-S-24091	95	97	99						
PHTI01-S-24071	102	102	106						
Methanol blank 2	100	100	100						
SDG 07-7-13a, analysis date July 13, 2007									
20-ppb standard	100	100	100	21.13	5.5	21.3	6.3	21.18	5.7
Laboratory blank	100	100	100						
PHTI02-S-24099	106	107	115						
PHTI02-S-24102	111	108	119						
PHTI02-S-24100	102	101	104	Outside calibration range for carbon tetrachloride at DF 1. Analyzed at dilution in this SDG.					
PHTI02-S-24096	102	99	100						
PHTI03-S-24113	106	103	106						
PHTI03-S-24116	103	100	105						
PHTI02-S-24106	104	100	102						
PHTI03-S-24115	98	97	97						
PHTI02-S-24092	100	100	102						
PHTI02-S-24101	96	95	99	Outside calibration range for carbon tetrachloride at DF 1. Analyzed at dilution in SDG 07-7-16b.					

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-7-13a, analysis date July 13, 2007 (cont.)									
PHTI02-S-24093	98	97	98						
PHTI02-S-24105	97	95	98						
PHTI02-S-24097	97	96	98						
PHTI02-S-24097DUP	96	95	95						
Methanol blank 2	86	86	87						
PHTI02-S-24100	98	92	102	Analyzed at DF 50.					
SDG 07-7-13b analysis date July 13, 2007									
20-ppb standard	100	100	100	20.15	0.7	21.75	8.4	21.78	8.5
Laboratory blank	100	100	100						
PHTI02-S-24108	91	91	90						
PHTI02-S-24104	102	107	101						
PHTI02-S-24098	102	103	104						
PHTI02-S-24107	100	100	102						
PHTI02-S-24109	97	98	100						
PHTI02-S-24094	96	99	97						
PHTI03-S-24114	100	98	97						
Methanol blank	99	88	90						
PHTI02-S-24103	92	94	94						
PHTI02-S-24095	90	91	88						
PHTI02-S-24110	92	95	88						
PHTI03-S-24111	97	97	95						
PHTI03-S-24111DUP	89	96	95						
PHTI03-S-24112	93	97	95						
PHQCTB-S-24120	94	98	96						

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-7-16a, analysis date July 16, 2007									
20-ppb standard	108	113	114	20.15	0.7	20.99	4.8	20.08	0.4
Laboratory blank	92	87	86						
PHTI03-W-24171	103	98	90						
PHTI18-W-24172	111	111	107						
PHMW6-W-24164	103	104	103						
PHKDHEP2-W-24165	103	111	105						
PHTI04-W-24210	114	120	113						
PHTI04-W-24211	114	114	113						
PHQCTB-W-24175	96	95	92						
PHTI04-W-24130	97	91	89						
PHTI04-W-24131	101	96	93						
PHTI04-W-24158	95	92	88						
PHTI04-W-24158DUP	96	92	86						
PHMW5-W-24160	94	85	80						
PHMW4-W-24162	95	84	85						
PHMW7-W-24068	86	88	91						
PHQCDUP-W-24163	96	87	89						
SDG 07-7-16b, analysis date July 16, 2007									
20-ppb standard	109	113	114	22.33	11.0	21.43	6.9	21.79	8.6
Laboratory blank	100	100	100						
PHTI03-S-24125	95	96	96						
PHTI03-S-24124	96	100	102						
PHTI04-S-24133	95	96	97						
PHTI04-S-24138	90	96	96						
PHTI03-S-24126	91	94	94						
PHTI03-S-24122	94	95	97						
PHTI03-S-24123	92	93	95						
PHTI03-S-24128	99	108	107						

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-7-16b, analysis date July 16, 2007 (cont.)									
PHTI02-S-24101	84	88	96	Analyzed at DF 50.					
Methanol blank 2	88	87	83						
PHTI04-S-24136	99	105	105						
PHTI04-S-24134	103	104	105						
PHTI04-S-24137	98	103	103						
Methanol blank 3	81	86	86						
SDG 07-7-17 analysis date July 17, 2007									
20-ppb standard	110	104	99	19.44	2.8	20.42	2.1	21.17	5.7
Laboratory blank	95	99	99						
PHTI05-W-24224	107	109	108						
PHTI02-W-24220	106	110	110						
PHTI09-W-24195	102	104	104						
PHTI06-W-24221	102	105	106						
PHQCTB-W-24223	107	102	102						
PHQCBR-W-24174	105	99	103						
PHKDHEP3-W-24069	102	101	100						
PHQCDUP-W-24161	93	88	87						
PHQCTB-W-24140	103	96	93						
Laboratory blank 2	105	101	101						
PHTI17-W-24177	92	98	98						
PHTI16-W-24176	104	111	108						
SDG 07-7-18, analysis date July 18, 2007									
20-ppb standard	100	100	100	17.44	13.7	19.2	4.1	18.26	9.1
Laboratory blank	90	85	86						
PHQCTB-S-24141	87	95	96						
PHTI03-S-24117	98	104	104						

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-7-18, analysis date July 18, 2007 (cont.)									
PHTI03-S-24119	102	112	111						
PHTI04-S-24132	102	106	104						
PHTI03-S-24127	99	102	105						
PHTI03-S-24118	104	101	101						
PHTI04-S-24135	96	105	104						
Methanol blank 2	100	100	100						
PHTI04-S-24153	100	99	101						
PHTI04-S-24157	92	100	100						
PHTI04-S-24154	92	100	100						
PHTI04-S-24139	96	102	100						
PHTI04-S-24151	97	104	103						
PHTI04-S-24156	96	105	103						
PHTI04-S-24156DUP	95	104	104						
PHTI04-S-24152	92	96	100						
PHTI04-S-24150	97	109	109						
PHTI04-S-24155	98	110	107						
PHQCTB-S-24170	98	108	106						
PHTI05-S-24225	100	112	116						
PHTI09-S-24207	102	110	117						
PHTI09-S-24206	98	118	118						
PHTI09-S-24206DUP	93	104	106						
SDG 07-7-20a, analysis date July 20, 2007									
20-ppb standard	86	100	97	18.48	7.9	20.02	0.1	19.5	2.5
Laboratory blank	113	118	118						
PHTI13-W-24149	94	95	100						
PHTI19-W-24241	104	104	106						
PHTI14-W-24147	101	103	108						
PHTI14-W-24146	101	104	104						

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-7-20a, analysis date July 20, 2007 (cont.)									
PHTI13-W-24144	100	100	100						
PHTI13-W-24144DUP	96	95	97						
PHTI15-W-24148	97	93	96						
PHTI05-W-24240	89	95	89						
PHQCTB-W-24145	106	101	103						
Laboratory blank 2	87	82	82						
SDG 07-7-20b, analysis date July 20, 2007									
20-ppb standard	92	108	111	18.37	8.5	21.18	5.7	20.53	2.6
Laboratory blank	100	100	100						
PHTI05-S-24229	99	100	102						
PHTI09-S-24216	97	94	99						
PHTI05-S-24226	95	92	97						
PHTI09-S-24205	94	93	97						
PHTI09-S-24204	94	91	96						
PHTI09-S-24209	93	90	95						
PHTI05-S-24232	92	93	94						
Methanol blank 2	95	93	92						
PHTI05-S-24228	89	88	92						
PHTI09-S-24215	94	91	95						
PHTI05-S-24231	90	89	93						
PHTI09-S-24200	90	90	91						
PHTI09-S-24208	91	88	90						
PHTI09-S-24203	91	90	93						
SDG 07-7-23, analysis date July 23, 2007									
20-ppb standard	115	106	105	20.46	2.3	22.2	10.4	21.43	6.9
Laboratory blank	109	106	110						

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-7-23, analysis date July 23, 2007 (cont.)									
PHTI05-S-24227	113	117	115						
PHTI05-S-24230	95	94	103						
PHTI06-S-24194	96	108	104						
PHTI06-S-24190	98	111	109						
PHTI09-S-24202	94	94	97						
PHTI06-S-24181	97	105	99						
PHTI06-S-24188	63[d]	67[d]	66[d]	Reanalyzed in SDG 07-7-24.					
PHTI06-S-24192	91	91	93						
PHTI09-S-24217	92	88	91						
PHTI06-S-24185	86	91	90						
PHTI09-S-24213	81	85	86						
PHTI09-S-24214	86	85	88						
PHTI06-S-24178	83	87	89						
PHTI06-S-24183	83	85	84						
PHTI06-S-24183DUP	84	89	85						
Methanol blank 2	83	87	86						
PHTI09-S-24199	89	97	97						
PHTI06-S-24191	92	102	106						
PHTI09-S-24197	89	101	106						
PHQCTB-S-24260	93	103	99						
PHTI05-S-24239	92	98	99						
PHTI05-S-24238	88	94	93						
Methanol blank 3	91	107	90						
Laboratory blank 2	100	100	100						
PHTI09-S-24201	106	96	91						
PHTI05-S-24233	102	96	96						
PHTI09-S-24198	103	95	92						
PHTI06-S-24189	105	93	95						
PHTI06-S-24186	103	94	93						
PHTI06-S-24187	105	94	92						

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-7-23, analysis date July 23, 2007 (cont.)									
PHTI06-S-24180	101	93	92						
Methanol blank 4	102	88	93						
PHTI06-S-24193	105	93	93						
PHTI06-S-24179	101	89	87						
PHTI06-S-24182	101	88	89						
PHTI06-S-24184	102	89	87						
SDG 07-7-24, analysis date July 24, 2007									
20-ppb standard	100	100	100	18.35	8.6	21.03	5.0	19.79	1.1
Laboratory blank	106	109	114						
PHTI05-S-24142	87	91	92						
PHTI05-S-24235	96	96	101						
PHTI05-S-24236	98	95	101						
PHTI05-S-24234	93	89	96						
PHQCTB-S-24143	90	91	96						
PHTI05-S-24237	97	95	99						
PHTI06-S-24188	97	91	101						
PHTI06-S-24188DUP	89	86	91						
Methanol blank 2	94	91	86						
SDG 07-7-27, analysis date July 27, 2007									
20-ppb standard	95	103	96	20.19	0.9	20.64	3.1	21.4	6.8
Laboratory blank	100	100	100						
PHTI27-W-24283	98	101	97						
PHTI23-W-24281	96	101	102						
PHTI22-W-24280	97	98	95						
PHTI11-W-24270	98	105	100						
PHTI28-W-24285	101	102	100						

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-7-27, analysis date July 27, 2007 (cont.)									
PHTI27A-W-24284	96	107	102						
PHTI23-W-24282	96	99	95						
PHTI23-W-24282DUP	97	96	95						
PHTI28T-W-24286	96	105	98						
SDG 07-7-30a, analysis date July 30, 2007									
20-ppb standard	111	107	100	22.34	11.1	22.55	12.0	23.22	14.9
Laboratory blank	100	100	100						
PHTI08-W-24294	103	104	105						
PHTI30-W-24298	105	105	102	Outside calibration range for carbon tetrachloride at DF 1. Analyzed at dilution in SDG 07-8-2.					
PHTI08-W-24295	105	103	105						
PHTI08-W-24295DUP	96	95	96						
PHTB2-W-24299	98	95	96						
PHTI26-W-24293	108	105	105						
PHTI25-W-24291	96	83	84						
PHTI31-W-24287	100	102	99						
PHTI10-W-24304	107	103	101						
PHTI29-W-24289	112	104	101						
PHTI25-W-24292	99	92	93						
PHTB-W-24290	101	103	104						
SDG 07-7-30b, analysis date July 30, 2007									
20-ppb standard	110	113	114	21.77	8.5	21.21	5.9	21.11	5.4
Laboratory blank	116	115	114						
PHTI11-S-24242	105	104	107						
PHTI11-S-24244	109	110	112						
PHTI11-S-24246	108	107	106						

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-7-30b, analysis date July 30, 2007 (cont.)									
PHTI11-S-24243	101	97	97						
PHTI11-S-24247	100	96	97						
PHTI11-S-24249	101	103	100						
PHTI11-S-24249DUP	101	101	102						
PHTI11-S-24263	98	95	95						
PHTI11-S-24267	100	99	98						
PHTI11-S-24248	100	95	95						
PHTI11-S-24266	97	92	92						
PHTI11-S-24262	95	90	93						
PHTI11-S-24268	97	94	94						
PHTI11-S-24265	96	94	97						
Methanol blank 2	84	85	86						
Methanol blank 3	106	99	99						
PHQCTB-S-24269	104	99	100						
PHTI11-S-24264	98	97	93						
PHTI11-S-24245	98	111	114						
PHTI10-S-24169	99	105	100						
PHTI10-S-24168	98	95	95						
PHTI10-S-24274	93	93	95						
PHTI10-S-24277	91	91	92						
SDG 07-7-31a, analysis date July 31, 2007									
20-ppb standard	103	112	110	19.09	4.7	19.97	0.2	20.58	2.9
Laboratory blank	86	80	82						
PHTI32-W-24297	105	103	98						
PHTI36-W-24349	95	97	102						
PHTI21-W-24253	100	104	108						
PHTI38-W-24352	89	90	90						
PHTI33-W-24254	90	91	95						

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-7-31a, analysis date July 31, 2007 (cont.)									
PHTI07-W-24296	90	90	92						
PHTI24-W-24350	87	89	90						
PHTI10-S-24278	96	87	87						
PHTI10-S-24273	96	90	92						
PHTI10-S-24279	87	87	87						
PHQCTB-S-24302	91	94	96						
PHTI10-S-24300	96	97	106						
PHTI12-S-24316	98	111	117						
PHTI12-S-24316DUP	93	99	100						
Methanol blank 2	97	88	89						
PHTI12-S-24306	91	95	99						
PHTI12-S-24307	97	101	106						
PHTI12-S-24308	103	112	111						
SDG 07-7-31b, analysis date July 31, 2007									
20-ppb standard	102	104	102	17.36	14.1	18.55	7.5	18.87	5.8
Laboratory blank	97	86	91						
PHTI20-W-24251	95	85	92						
PHTI34-W-24353	100	96	102						
PHQCBR-W-24354	103	114	109						
PHTI34-W-24353DUP	95	90	94						
PHTB3-W-24255	100	95	102						
PHTI20R-W-24252	102	102	105						
Methanol blank	93	86	87						
PHTI10-S-24276	98	94	91						
PHTI10-S-24272	65[d]	63[d]	61[d]	Reanalyzed in SDG 07-8-1a.					
PHTI10-S-24271	94	102	96						
PHTI10-S-24275	96	96	89						
PHTI10-S-24301	97	96	88						

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-7-31b, analysis date July 31, 2007 (cont.)									
PHTI10-S-24301DUP	95	92	88						
PHTI10-S-24167	80	81	80						
Methanol blank 2	99	91	87						
SDG 07-8-1a, analysis date August 1, 2007									
20-ppb standard	100	100	100	18.12	9.9	18.26	9.1	18.5	7.8
Laboratory blank	90	81	77[d]	Accepted. Second blank in this SDG within recovery limits.					
PHTI18-S-24348	107	108	101						
PHTI18-S-24334	119	118	114						
PHTI10-S-24272	107	113	104						
PHTI18-S-24347	114	114	114						
PHTI08-S-24325	102	105	106						
PHTI08-S-24333	106	104	103						
PHTI18-S-24344	105	105	97						
PHTI18-S-24345	98	96	93						
PHTI08-S-24330	98	98	94						
PHTI18-S-24338	91	85	88						
PHTI08-S-24326	100	94	93						
PHTI18-S-24341	101	103	99						
PHTI18-S-24336	99	96	92						
PHTI18-S-24336DUP	96	94	90						
Methanol blank 2	95	90	85						
SDG 07-8-1b, analysis date August 1, 2007									
20-ppb standard	100	100	100	22.39	11.3	23.32	15.3	24.53	20.3
Laboratory blank	100	100	100						
PHTI12-S-24309	96	96	98						
PHTI12-S-24305	93	95	96						

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-8-1b, analysis date August 1, 2007 (cont.)									
PHTI12-S-24310	91	95	95						
PHTI12-S-24311	91	90	93						
PHTI12-S-24312	88	92	95						
PHTI12-S-24313	89	91	95						
PHQCTB-S-24250	95	115	113						
PHTI12-S-24314	97	105	100						
PHTI12-S-24315	91	101	100						
PHTI12-S-24315DUP	97	95	98						
Methanol blank	98	95	95						
PHTI18-S-24346	98	95	95						
PHTI08-S-24320	96	96	99						
PHTI18-S-24340	97	99	97						
PHTI18-S-24337	75[d]	78[d]	82	Reanalyzed in SDG 07-8-6.					
PHTI08-S-24332	91	92	93						
PHTI08-S-24328	92	96	97						
PHTI08-S-24327	94	94	98						
SDG 07-8-2, analysis date August 2, 2007									
20-ppb standard	100	100	100	16.13	21.4	18.09	10.0	21.64	7.9
Laboratory blank	100	100	100						
PHMW11-W-24669	106	93	88						
PHTI35-W-24684	103	109	111						
PHTI37-W-24256	105	112	119						
PHTI43-W-24680	105	107	113						
PHGW-W-24683	104	105	108						
PHQCTB-W-24681	103	98	103						
Laboratory blank 2	95	97	96						
PHMW11-W-24669	91	99	104	Analyzed at DF 10.					
PHTI43-W-24680	104	105	114	Analyzed at DF 20.					

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-8-2, analysis date August 2, 2007 (cont.)									
PHTI30-W-24298	101	102	106	Analyzed at DF 10.					
Methanol blank	100	100	100						
PHTI08-S-24321	96	102	108						
PHTI08-S-24319	105	119	107						
PHTI08-S-24331	99	105	112						
PHTI18-S-24339	96	114	117						
PHTI08-S-24324	94	109	111						
PHTI18-S-24335	98	103	108						
PHTI08-S-24329	99	102	110						
PHTI08-S-24329DUP	95	99	104						
Methanol blank 2	88	89	97						
SDG 07-8-3, analysis date August 3, 2007									
20-ppb standard	100	100	100	19.74	1.3	21.24	6.0	21.85	8.8
Laboratory blank	99	95	98						
PHTI12-W-24688	93	103	98						
PHTI45-W-24690	109	112	109						
PHTI44-W-24685	109	113	118						
PHTI44-W-24685DUP	109	115	115						
PHMW12-W-24687	104	109	110	Outside calibration range for carbon tetrachloride at DF 1. Analyzed at dilution in SDG 07-8-6.					
PHQCBR-W-24686	103	114	107						
PHQCTB-W-24689	101	105	102						
SDG 07-8-6, analysis date August 6, 2007									
20-ppb standard	101	106	99	19.23	3.9	19.95	0.3	20.12	0.6
Laboratory blank	100	100	100						
PHMW12-W-24687	87	89	90	Analyzed at DF 10.					

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-8-6, analysis date August 6, 2007 (cont.)									
Methanol blank	100	100	100						
PHTI18-S-24337	98	95	96						
PHTI18-S-24342	103	96	94						
PHTI08-S-24323	96	100	100						
PHTI08-S-24322	103	102	102						
PHQCTB-S-24355	102	97	96						
PHTI18-S-24343	103	95	95						
PHTI18-S-24343DUP	96	93	91						
PHTI07-S-24661	101	101	95						
PHTI07-S-24257	98	91	89						
PHTI07-S-24359	98	94	92						
PHTI07-S-24663	98	94	93						
SDG 07-8-7, analysis date August 7, 2007									
20-ppb standard	103	98	96	17.02	16.1	19	5.1	21.2	5.8
Laboratory blank	100	100	100						
PHTI41-W-24695	93	95	93						
PHTI42-W-24694	95	95	99						
PHTI39-W-24691	100	100	103						
PHTI39-W-24691DUP	90	92	95						
PHTB4-W-24692	89	90	93						
SDG 07-8-8, analysis date August 8, 2007									
20-ppb standard	92	110	118	17.42	13.8	17.75	11.9	17.42	13.8
Laboratory blank	115	110	109						
PHTI07-S-24258	110	114	115						
PHTI07-S-24668	98	111	111						
PHTI07-S-24667	99	106	110						

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-8-8, analysis date August 8, 2007 (cont.)									
PHTI07-S-24666	101	109	106						
PHTI07-S-24660	94	104	109						
PHTI07-S-24665	95	104	106						
PHTI07-S-24358	96	105	104						
PHTI07-S-24358DUP	83	91	91						
PHTI07-S-24664	94	101	101						
PHTI07-S-24662	87	88	93						
PHTI07-S-24259	93	98	97						
PHTI07-S-24357	86	94	97						
SDG 07-8-24, analysis date August 24, 2007									
20-ppb standard	95	92	91	19.82	0.9	18.88	5.8	20.66	3.2
Laboratory blank	113	110	111						
PHQCTB-W-24703	87	90	89						
PHMW14-W-24670	110	112	114						
PHTI40-W-24671	98	103	102						
PHMW15-W-24672	90	93	96						
PHMW17-W-24673	105	118	114						
PHMW13-W-24674	111	119	117						
PHMW16-W-24675	101	110	109						
PHMW11-W-24676	100	113	108	Outside calibration range for carbon tetrachloride at DF 1. Analyzed at dilution in SDG 07-8-28.					
PHMW12-W-24677	94	102	98	Outside calibration range for carbon tetrachloride at DF 1. Analyzed at dilution in SDG 07-8-28.					
PHSMITH-W-24678	94	110	104						
PHQCIR4-W-24679	94	96	94						
PHKICKAPOO-W-24701	95	96	92						
PHKICKAPOODUP-W-24702	97	108	102						
PHSCHUETZ-W-24700	90	91	89						

TABLE S4.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	*p*-Bromo-fluorobenzene	1,4-Dichloro-benzene-d_4	ppb	RPD[c]	ppb	RPD[c]	ppb	RPD[c]
SDG 07-8-28, analysis date August 28, 2007									
20-ppb standard	96	99	96	20.75	3.7	21.24	6.0	21.67	8.0
Laboratory blank	92	90	91						
PHMW11-W-24676	90	99	100	Analyzed at DF 5.					
PHMW12-W-24677	95	100	99	Analyzed at DF 5.					
PHMW12-W-24677DUP	98	98	96	Duplicate analysis at DF 5.					

[a] Quality control range for recovery = 80-120%.

[b] Concentration in parts per billion (µg/L in water or µg/kg in soil).

[c] Quality control range for RDP = ±20%.

[d] Surrogate recovery outside quality control range.

TABLE S4.4 Results for secondary organic analyses of soil and water samples at the AGEM Laboratory.

Medium	Sample Type[a]	Location	Depth (ft)	Sampling Date	Sample	Analysis Type[b]	Analysis Date	Concentration: Carbon Tetrachloride	Concentration: Chloroform	Concentration: Methylene Chloride	Concentration: Units
Soil	CPT	TI01	22	7/10/07	PHTI01-S-24075	Primary	7/12/07	130	22	ND[c]	µg/kg
					PHTI01-S-24076	Replicate	7/12/07	124	22	ND	µg/kg
Soil	CPT	TI01	42	7/10/07	PHTI01-S-24082	Primary	7/12/07	269	11	ND	µg/kg
					PHTI01-S-24082DUP	Duplicate	7/12/07	286	12	ND	µg/kg
Water	CPT	TI01	59.5-64.5	7/9/07	PHTI01-W-24060	Primary	7/11/07	1090	35	ND	µg/L
					PHTI01-W-24060DUP	Duplicate	7/11/07	1067	33	ND	µg/L
Soil	CPT	TI02	18	7/11/07	PHTI02-S-24097	Primary	7/13/07	217	32	ND	µg/kg
					PHTI02-S-24097DUP	Duplicate	7/13/07	226	32	ND	µg/kg
Soil	CPT	TI02	54	7/11/07	PHTI02-S-24107	Primary	7/13/07	4.7 J[d]	ND	ND	µg/kg
					PHTI02-S-24108	Replicate	7/13/07	3.2 J	ND	ND	µg/kg
Soil	CPT	TI03	2	7/11/07	PHTI03-S-24111	Primary	7/13/07	ND	ND	ND	µg/kg
					PHTI03-S-24111DUP	Duplicate	7/13/07	ND	ND	ND	µg/kg
Soil	CPT	TI04	46	7/13/07	PHTI04-S-24154	Primary	7/18/07	12	3.4 J	ND	µg/kg
					PHTI04-S-24155	Replicate	7/18/07	10	2.8 J	ND	µg/kg
Soil	CPT	TI04	48.75	7/13/07	PHTI04-S-24156	Primary	7/18/07	14	3.5 J	ND	µg/kg
					PHTI04-S-24156DUP	Duplicate	7/18/07	15	3.5 J	ND	µg/kg
Water	CPT	TI04	55-60	7/13/07	PHTI04-W-24158	Primary	7/16/07	223	32	ND	µg/L
					PHTI04-W-24158DUP	Duplicate	7/16/07	212	30	ND	µg/L
Water	CPT	TI04	60.4-65.4	7/12/07	PHTI04-W-24130	Primary	7/16/07	229	32	ND	µg/L
					PHTI04-W-24131	Replicate	7/16/07	240	32	ND	µg/L
Soil	CPT	TI05	26	7/16/07	PHTI05-S-24231	Primary	7/20/07	ND	ND	ND	µg/kg
					PHTI05-S-24232	Replicate	7/20/07	ND	ND	ND	µg/kg
Soil	CPT	TI06	22	7/15/07	PHTI06-S-24183	Primary	7/23/07	ND	ND	ND	µg/kg
					PHTI06-S-24183DUP	Duplicate	7/23/07	ND	ND	ND	µg/kg

TABLE S4.4 (Cont.)

Medium	Sample Type[a]	Location	Depth (ft)	Sampling Date	Sample	Analysis Type[b]	Analysis Date	Carbon Tetrachloride	Chloroform	Methylene Chloride	Units
Soil	CPT	TI06	26	7/15/07	PHTI06-S-24184	Primary	7/23/07	ND	ND	ND	µg/kg
					PHTI06-S-24185	Replicate	7/23/07	ND	ND	ND	µg/kg
Soil	CPT	TI06	37.5	7/15/07	PHTI06-S-24188	Primary	7/24/07	ND	ND	ND	µg/kg
					PHTI06-S-24188DUP	Duplicate	7/24/07	ND	ND	ND	µg/kg
Soil	CPT	TI07	6	7/31/07	PHTI07-S-24358	Primary	8/8/07	ND	ND	ND	µg/kg
					PHTI07-S-24358DUP	Duplicate	8/8/07	ND	ND	ND	µg/kg
Soil	CPT	TI07	34	7/31/07	PHTI07-S-24662	Primary	8/8/07	ND	ND	ND	µg/kg
					PHTI07-S-24663	Replicate	8/6/07	ND	ND	ND	µg/kg
Soil	CPT	TI08	42	7/29/07	PHTI08-S-24329	Primary	8/2/07	ND	ND	ND	µg/kg
					PHTI08-S-24329DUP	Duplicate	8/2/07	ND	ND	ND	µg/kg
Soil	CPT	TI08	50	7/29/07	PHTI08-S-24331	Primary	8/2/07	ND	ND	ND	µg/kg
					PHTI08-S-24332	Replicate	8/1/07	ND	ND	ND	µg/kg
Water	CPT	TI08	56-61	7/28/07	PHTI08-W-24294	Primary	7/30/07	0.8 J	0.6 J	ND	µg/L
					PHTI08-W-24295	Replicate	7/30/07	0.7 J	0.5 J	ND	µg/L
					PHTI08-W-24295DUP	Duplicate	7/30/07	0.5 J	0.5 J	ND	µg/L
Soil	CPT	TI09	18	7/15/07	PHTI09-S-24201	Primary	7/23/07	ND	ND	ND	µg/kg
					PHTI09-S-24202	Replicate	7/23/07	ND	ND	ND	µg/kg
Soil	CPT	TI09	31	7/16/07	PHTI09-S-24206	Primary	7/18/07	ND	ND	ND	µg/kg
					PHTI09-S-24206DUP	Duplicate	7/18/07	ND	ND	ND	µg/kg
Soil	CPT	TI10	42	7/27/07	PHTI10-S-24168	Primary	7/30/07	6.3 J	2 J	ND	µg/kg
					PHTI10-S-24169	Replicate	7/30/07	9.8 J	3.2 J	ND	µg/kg
Soil	CPT	TI10	50	7/27/07	PHTI10-S-24301	Primary	7/31/07	8.5 J	ND	ND	µg/kg
					PHTI10-S-24301DUP	Duplicate	7/31/07	6.9 J	ND	ND	µg/kg
Soil	CPT	TI11	26	7/26/07	PHTI11-S-24248	Primary	7/30/07	ND	ND	ND	µg/kg
					PHTI11-S-24249	Replicate	7/30/07	ND	ND	ND	µg/kg
					PHTI11-S-24249DUP	Duplicate	7/30/07	ND	ND	ND	µg/kg

TABLE S4.4 (Cont.)

Medium	Sample Type[a]	Location	Depth (ft)	Sampling Date	Sample	Analysis Type[b]	Analysis Date	Carbon Tetrachloride	Chloroform	Methylene Chloride	Units
Soil	CPT	TI12	42	7/28/07	PHTI12-S-24315	Primary	8/1/07	ND	ND	ND	µg/kg
					PHTI12-S-24315DUP	Duplicate	8/1/07	ND	ND	ND	µg/kg
Soil	CPT	TI12	46	7/28/07	PHTI12-S-24316	Primary	7/31/07	ND	ND	ND	µg/kg
					PHTI12-S-24316DUP	Duplicate	7/31/07	ND	ND	ND	µg/kg
Water	CPT	TI13	61.1-66.1	7/17/07	PHTI13-W-24144	Primary	7/20/07	36	4.3	ND	µg/L
					PHTI13-W-24144DUP	Duplicate	7/20/07	37	4.4	ND	µg/L
Soil	CPT	TI18	10	7/29/07	PHTI18-S-24336	Primary	8/1/07	ND	ND	ND	µg/kg
					PHTI18-S-24336DUP	Duplicate	8/1/07	ND	ND	ND	µg/kg
Soil	CPT	TI18	38	7/30/07	PHTI18-S-24343	Primary	8/6/07	ND	ND	ND	µg/kg
					PHTI18-S-24343DUP	Duplicate	8/6/07	ND	ND	ND	µg/kg
					PHTI18-S-24344	Replicate	8/1/07	ND	ND	ND	µg/kg
Water	CPT	TI23	60.5-65.5	7/26/07	PHTI23-W-24281	Primary	7/27/07	ND	ND	ND	µg/L
					PHTI23-W-24282	Replicate	7/27/07	ND	ND	ND	µg/L
					PHTI23-W-24282DUP	Duplicate	7/27/07	ND	ND	ND	µg/L
Water	CPT	TI25	60-65	7/27/07	PHTI25-W-24291	Primary	7/30/07	0.4 J	ND	ND	µg/L
					PHTI25-W-24292	Replicate	7/30/07	0.4 J	ND	ND	µg/L
Water	CPT	TI34	62.26-67.26	7/30/07	PHTI34-W-24353	Primary	7/31/07	7.8	2.3	ND	µg/L
					PHTI34-W-24353DUP	Duplicate	7/31/07	8	2.3	ND	µg/L
Water	CPT	TI39	53.5-58.5	8/3/07	PHTI39-W-24691	Primary	8/7/07	0.6 J	ND	ND	µg/L
					PHTI39-W-24691DUP	Duplicate	8/7/07	0.7 J	ND	ND	µg/L
Water	CPT	TI44	59.1-64.1	8/2/07	PHTI44-W-24685	Primary	8/3/07	ND	ND	ND	µg/L
					PHTI44-W-24685DUP	Duplicate	8/3/07	ND	ND	ND	µg/L
Water	MW	MW4	54.7-64.7	7/13/07	PHMW4-W-24162	Primary	7/16/07	2.3	0.3 J	ND	µg/L
					PHQCDUP-W-24163	Replicate	7/16/07	2.6	0.3 J	ND	µg/L
Water	MW	MW5	58-68	7/13/07	PHMW5-W-24160	Primary	7/16/07	ND	ND	ND	µg/L
					PHQCDUP-W-24161	Replicate	7/17/07	ND	ND	ND	µg/L

TABLE S4.4 (Cont.)

Medium	Sample Type[a]	Location	Depth (ft)	Sampling Date	Sample	Analysis Type[b]	Analysis Date	Carbon Tetrachloride	Chloroform	Methylene Chloride	Units
Water	MW	MW9	52-62	7/9/07	PHMW9-W-24067	Primary	7/11/07	ND	ND	ND	µg/L
					PHMW9-W-24067DUP	Duplicate	7/11/07	ND	ND	ND	µg/L
Water	MW	MW12	50.3-60.3	8/23/07	PHMW12-W-24677	Primary	8/28/07	123	30	ND	µg/L
					PHMW12-W-24677DUP	Duplicate	8/28/07	125	30	ND	µg/L
Water	DW	Kickapoo	Unk	8/23/07	PHKICKAPOO-W-24701	Primary	8/24/07	ND	ND	ND	µg/L
					PHKICKAPOODUP-W-24702	Replicate	8/24/07	ND	ND	ND	µg/L

[a] Sample types: CPT, cone penetrometer; DW, domestic well; MW, monitoring well.

[b] Replicate samples were prepared in the field; duplicate analyses were performed on samples selected in the laboratory.

[c] ND, contaminant not detected at an instrument detection limit of 0.1 µg/L for water samples and 1.0 µg/kg for soil samples.

[d] Qualifier J indicates an estimated concentration below the purge-and-trap method quantitation limit of 1.0 µg/L for water samples or 10.0 µg/kg for soil samples.

TABLE S4.5 Recovery of system-monitoring compounds in verification organic analyses of soil samples by TestAmerica Laboratories with EPA Method 8260B.

Sample	Analysis Date	Sample Delivery Group	Recovery[a] (%) 1,2-Dichloroethane-d_4	Toluene-d_8	Bromofluorobenzene	1,2-Dichlorobenzene-d_4
MEOH080307LCS	8/3/07	121065	107	95	102	89
PH-MEOHBLK-072407	8/3/07	121065	86	95	101	90
PHTI02-S-24100	8/3/07	121065	88	97	100	89
PHTI06-S-24182	8/3/07	121065	87	98	101	91
PHTI05-S-24234	8/3/07	121065	87	98	92	93
PHTI04-S-24155	8/3/07	121065	80	97	98	96
PHTI09-S-24201	8/3/07	121065	90	96	100	94
PHTI01-S-24082	8/3/07	121065	90	98	100	93
PHTI01-S-24071	8/3/07	121065	91	98	97	94
PHTI03-S-24117	8/3/07	121065	85	102	99	95
PHTI02-S-24093	8/3/07	121065	88	98	101	92
PHTI03-S-24114	8/3/07	121065	86	99	103	93
PHTI05-S-24232	8/3/07	121065	87	98	104	92
PHTI06-S-24190	8/3/07	121065	86	100	103	91
MEOH081307LCS	8/13/07	121065	88	94	90	92
PHTI02-S-24100DL	8/13/07	121065	78[b]	101	99	96
LA080307LCS	8/3/07	121065	102	97	99	100
MBLK080307LA	8/3/07	121065	105	100	106	100
NA081307LCS	8/13/07	121065	102	100	98	99
MBLK081307NA	8/13/07	121065	99	100	101	95
MEOH081507LCS	8/15/07	121337	99	103	99	95
PH-MEOHBLK-080907	8/16/07	121337	105	100	103	93
PHTI11-S-24266	8/16/07	121337	101	101	104	93
PHTI10-S-24167	8/16/07	121337	99	100	104	95
PHTI08-S-24320	8/16/07	121337	102	100	103	96
PHTI08-S-24326	8/16/07	121337	101	100	105	93
PHTI18-S-24343	8/16/07	121337	102	102	106	95
PHTI12-S-24313	8/16/07	121337	103	100	103	94
PHTI07-S-24665	8/16/07	121337	105	100	107	98
NB081507LCS	8/15/07	121337	102	105	103	100
MBLK081507NB	8/15/07	121337	106	101	108	101

[a] Quality control ranges for recovery:

Compound	Range (%)
1,2-Dichloroethane-d_4	80-125
Toluene-d_8	85-115
Bromofluorobenzene	85-120
1,2-Dichlorobenzene-d_4	80-125

[b] Recovery outside quality control range.

TABLE S4.6 Recovery of contaminants of concern in laboratory quality control samples during verification organic analysis of soil samples at TestAmerica Laboratories.

			Carbon Tetrachloride			Chloroform		
Sample	Analysis Date	Sample Delivery Group	Spiked Concentration (ppb)[a]	Detected Concentration (ppb)[a]	Recovery[b] (%)	Spiked Concentration (ppb)[a]	Detected Concentration (ppb)[a]	Recovery[b] (%)
MEOH080307LCSLCS	8/3/07	121065	200	180	90	200	190	95
MEOH081307LCS	8/13/07	121065	200	200	100	200	200	100
LA080307LCS	8/3/07	121065	10	9.8	98	10	9.8	98
NA081307LCS	8/13/07	121065	10	10	100	10	10	100
MEOH081507LCS	8/15/07	121337	200	190	95	200	210	105
NB081507LCS	8/15/07	121337	10	11	110	10	11	110

[a] Concentration in parts per billion (µg/L in water or µg/kg in soil).

[b] Quality control ranges for recovery:

Compound	Range (%)
Carbon tetrachloride	80-115
Chloroform	80-115

TABLE S4.7 Results of verification organic analysis of soil samples.

				Concentration[a] (µg/kg)			
				AGEM Laboratory		TestAmerica Laboratories	
Location	Sample	Depth (ft BGL)	Sampling Date	Carbon Tetrachloride	Chloroform	Carbon Tetrachloride	Chloroform
TI01	PHTI01-S-24071	6	7/10/07	10 U	10 U	8.1 U	8.1 U
TI01	PHTI01-S-24082	42	7/10/07	269	11	210	9.3
TI02	PHTI02-S-24093	6	7/11/07	6.8 J	10 U	16	8.5 U
TI02	PHTI02-S-24100	30	7/11/07	2140	61	1100 S	35 S
TI03	PHTI03-S-24114	14	7/11/07	10 U	10 U	8.3 U	8.3 U
TI03	PHTI03-S-24117	26	7/12/07	10 U	10 U	8.8 U	8.8 U
TI04	PHTI04-S-24155	46	7/13/07	10	2.8 J	6.5 J	8.5 U
TI05	PHTI05-S-24232	26	7/16/07	10 U	10 U	9.4 U	9.4 U
TI05	PHTI05-S-24234	33.7	7/17/07	10 U	10 U	8.0 U	8 U
TI06	PHTI06-S-24182	18	7/15/07	10 U	10 U	8.6 U	8.6 U
TI06	PHTI06-S-24190	43	7/15/07	10 U	10 U	8.8 U	8.8 U
TI07	PHTI07-S-24665	42	7/31/07	10 U	10 U	9.0 U	9 U
TI08	PHTI08-S-24320	6	7/28/07	10 U	10 U	8.1 U	5.5 J B
TI08	PHTI08-S-24326	30	7/29/07	10 U	10 U	8.4 U	5.8 J B
TI09	PHTI09-S-24201	18	7/15/07	10 U	10 U	8.6 U	8.6 U
TI10	PHTI10-S-24167	38	7/27/07	68	5 J	89	8.8 J B
TI11	PHTI11-S-24266	46	7/26/07	6.5 J	1 J	12	4.4 J B
TI12	PHTI12-S-24313	34	7/28/07	10 U	10 U	9.3 U	7.8 J B
TI18	PHTI18-S-24343	38	7/30/07	10 U	10 U	8.5 U	5.9 J B

[a] Qualifiers:
B, contaminant present in associated blank.
J, estimated concentration below the indicated quantitation limit.
S, surrogate recovery outside target range.
U, contaminant not detected at an instrument detection limit of 1.0 µg/kg, below indicated quantitation limit.

TABLE S4.8 Recovery of system-monitoring compounds in verification organic analysis of water samples by Envirosystems, Inc.

Sample	Analysis Date	Sample Delivery Group	Recovery[a] (%) Toluene-d_8	Bromofluoro-benzene	1,1-Dichloro-ethene-d_4
PHKDHEP2-W-24165	7/18/07	0702540	93	90	95
PHMW6-W-24164	7/18/07	0702540	98	96	107
PHQCTB-W-24261	7/18/07	0702540	96	90	103
PHTI09-W-24196	7/18/07	0702540	95	91	99
VBLKHI	7/18/07	0702540	98	96	99
PHQCTB-W-24356	8/1/07	0702550	90	86	91
PHTI08-W-24294	7/31/07	0702550	106	97	96
PHTI27-W-24283	8/1/07	0702550	90	87	95
PHTI26-W-24351	7/31/07	0702550	98	91	92
VBLK01	7/31/07	0702550	109	101	95
VBLKHW	8/1/07	0702550	105	94	94
PHQCTB-W-24697	8/9/07	0702610	98	93	97
PHTI41-W-24696	8/8/07	0702610	97	93	88
VBLKHD	8/8/07	0702610	103	95	88
VBLKHE	8/9/07	0702610	94	87	86
PHMW11-W-24676	8/28/07	0702640	92	85	100
PHQCTB-W-24703b	8/28/07	0702640	93	86	101
VBLKHX	8/28/07	0702640	103	90	104

[a] Quality control ranges for recovery:

Compound	Range (%)
Toluene-d_8	88-110
Bromofluorobenzene	76-114
1,1-Dichloroethene-d_4	80-120

TABLE S4.9 Results of verification organic analysis of groundwater samples.

Location	Sample	Depth (ft)	Sampling Date	Concentration (µg/L)								Relative Percent Difference (%)			
				AGEM Laboratory				Envirosystems, Inc.							
				Carbon Tetrachloride	Chloroform	Methylene Chloride	Ethylene Dibromide	Carbon Tetrachloride	Chloroform	Methylene Chloride	Ethylene Dibromide	Carbon Tetrachloride	Chloroform	Methylene Chloride	Ethylene
TI08	PHTI08-W-24294	56-61	7/28/07	0.8 J[a]	0.6 J	ND[b]	ND	ND	ND	ND	ND	–	–	–	–
TI09	PHTI09-W-24195/24196[c]	57.6-62.6	7/15/07	0.4 J	0.3 J	ND	ND	ND	ND	ND	ND	–	–	–	–
TI27	PHTI27-W-24283	54.7-59.7	7/26/07	3.3	1.1	ND	ND	2.3 J	1.1 J	ND	ND	35.7	0	–	–
TI36	PHTI36-W-24349/24351[d]	57.7-62.7	7/30/07	ND	ND	ND	ND	ND	ND	ND	ND	–	–	–	–
TI41	PHTI41-W-24695/24696[e]	63.56-68.56	8/3/07	0.6 J	ND	ND	ND	ND	ND	ND	ND	–	–	–	–
KDHEP-2	PHKDHEP2-W-24165	58.1-68.1	7/14/07	70	4.9	ND	ND	70	5.1	ND	ND	0	4.0	–	–
MW6	PHMW6-W-24164	56-66	7/14/07	0.6 J	ND	ND	ND	ND	ND	ND	ND	–	–	–	–
MW11	PHMW11-W-24676	55.5-65.5	8/23/07	123	30	ND	ND	150	39	ND	ND	19.7	26.1	–	–

[a] Qualifier J indicates an estimated concentration below the purge-and-trap method quantitation limit of 1.0 µg/L or the CLP method quantitation limit of 5.0 µg/L.

[b] ND, contaminant not detected at instrument detection limit of 0.1 µg/L for analyses at the AGEM Laboratory or 1.0 µg/L for CLP analyses by Envirosystems, Inc.

[c] Submitted as sample PHTI09-W-24195 to AGEM Laboratory and sample PHTI09-W-24196 to Envirosystems, Inc.

[d] Submitted as sample PHTI36-W-24349 to AGEM Laboratory and sample PHTI36-W-24351 to Envirosystems, Inc.

[e] Submitted as sample PHTI41-W-24695 to AGEM Laboratory and sample PHTI41-W-24696 to Envirosystems, Inc.

Supplement 5:

Outside Laboratory Data

Supplement 5 Contents

ENVIROSYSTEMS, INC.

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August 7, 2007

Jorge S. Alvarado, Ph.D
Argonne National Laboratory
Environmental Research Division
Applied Geoscience and Environmental
Management Section
9700 South Cass Avenue, ER-203
Argonne, Illinois 60439

RE: ENVSY Report 070254

Dear Jorge:

Enclosed are the results of analysis for the samples received on July 17, 2007 for volatile organics analysis by US EPA 8260B with a lower reporting limit of 5ug/L.

Please do not hesitate to call me if you have any questions, comments, or require additional information.

Sincerely,

Thomas Scott

FOR Mohan Khare, Ph.D
President/CEO

MK/ncc

SDG NARRATIVE

Envirosystems, Inc.

Contract: N/A
Client: Argonne National Laboratory
Work Order: 0070713
SDG: Arg713

SAMPLE RECIEPT

Date received: July 17, 2007
Cooler Temperature: 3-deg C

Sample Summary

Client ID	Laboratory ID	Matrix	Fraction	pH
PHT109-W-24196	0070713-01	WATER	VOA	7
PHKOWEP2-W-241965	0070713-02	WATER	VOA	7
PHMW6-W-24164	0070713-03	WATER	VOA	7
PHQCT3-W-24261	0070713-04	WATER	VOA	7

VOLATILES SECTION

1. HOLDING TIMES

All holding times were met.

2. METHODS

8260B/CLPLIKE

3. INSTRUMENT AND CHROMATOGRAPHIC CONDITIONS

A Hewlett Packard 6890 gas chromatograph equipped with a Hewlett Packard 5975 MSD was used for sample analysis. The capillary column used was a Restek 20m by 0.18 mm ID by 1.0 µm film thickness (Restek Cat. # RTX-624). The trap used with the sample concentrator is an EST K Trap, 30cm packed with Carbopack B / Carboxen 1000 & 1001 (VOCARB 3000)

4. PREPARATION

Water samples were prepared by 8260B

5. ANALYSIS

A. Calibration:

Initial calibration met all acceptance criteria.

B. Blanks:

All acceptance criteria were met.

SDG NARRATIVE

C. Surrogates/Deuterated Monitoring Compounds (DMCs):

All acceptance criteria were met.

D. Spikes:

I. Laboratory Control Spikes (LCS)

Laboratory Control Spikes were not used for this method.

II. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD were not used for this method.

III. Internal Standards

All acceptance criteria were met.

E. Samples

Sample analysis proceeded normally.

Manual Integration Summary

The chemist manually integrated the following standards and samples: None.

Reason Codes:

A. Baseline integration, re-inforced due to interference on target peak.
B. Baseline integration, peak not properly integrated by software integrator.
C. Target peak was not properly identified, more than one peak in retention time window.
D. Split peak, more than one peak in retention time window.

I certify that this Sample Data Package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in the hard copy Sample Data Package and in the Electronic Data Deliverables has been authorized by the laboratory manager or the manager's designee, as verified by the following signatures.

Thomas Scath
Laboratory Manager

8-7-07
Date

3972

| | | |

VOLATILE SAMPLE DATA

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHTI09-W-24196

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: Argonne70713

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070713-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF627.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/17/2007

% Moisture: not dec. Date Analyzed: 07/18/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHTI09-W-24196

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: Argonne70713

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070713-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF627.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/17/2007

% Moisture: not dec. Date Analyzed: 07/18/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHKOWEP2-W-24165

24165 CBD 8/9/07

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: Argonne70713

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070713-02

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF628.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/17/2007

% Moisture: not dec. Date Analyzed: 07/18/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.1	
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	70	
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHKOWEP2-W-241965

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: Argonne70713

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070713-02

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF628.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/17/2007

% Moisture: not dec. Date Analyzed: 07/18/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHMW6-W-24164

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: Argonne70713

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070713-03

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF629.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/17/2007

% Moisture: not dec. Date Analyzed: 07/18/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHMW6-W-24164

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: Argonne70713

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070713-03

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF629.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/17/2007

% Moisture: not dec. Date Analyzed: 07/18/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHQCT3-W-24261

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: Argonne70713

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070713-04

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF630.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/17/2007

% Moisture: not dec. Date Analyzed: 07/18/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	3.8	J
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHQCT3-W-24261

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: Argonne70713

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070713-04

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF630.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/17/2007

% Moisture: not dec. Date Analyzed: 07/18/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

ENVIROSYSTEMS, INC.

9200 Rumsey Road • Suite B102 • Columbia, Maryland 21045-1934
Phone (410) 964-0330 • Fax (410) 740-9306
Email: info@envsystems.com • Webpage: www.envsystems.com/envsys

August 7, 2007

Jorge S. Alvarado, Ph.D
Argonne National Laboratory
Environmental Research Division
Applied Geoscience and Environmental
Management Section
9700 South Cass Avenue, ER-203
Argonne, Illinois 60439

RE: ENVSY Report 070255

Dear Jorge:

Enclosed are the results of analysis for the samples received on July 31, ~~2003~~ 2007 for volatile organics analysis by US EPA 8260B with a lower reporting limit of 5ug/L.

Please do not hesitate to call me if you have any questions, comments, or require additional information.

Sincerely,

Thomas Scott

Mohan Khare, Ph.D
President/CEO

MK/ncc

SDG NARRATIVE

Envirosystems, Inc.

Contract: N/A
Client: Argonne National Laboratory
Work Order: 0070719
SDG: Arg719

SAMPLE RECIEPT

Date received: July 31, 2007
Cooler Temperature: 3-deg C

Sample Summary

Client ID	Laboratory ID	Matrix	Fraction	pH
PHT136-W-24351	0070719-01	WATER	VOA	7
PHT108-W-24294	0070719-02	WATER	VOA	7
PHT127-W-24283	0070719-03	WATER	VOA	7
PHQCTB-W-24356	0070719-04	WATER	VOA	7

VOLATILES SECTION

1. HOLDING TIMES

All holding times were met.

2. METHODS

8260B/CLPLIKE

3. INSTRUMENT AND CHROMATOGRAPHIC CONDITIONS

A Hewlett Packard 6890 gas chromatograph equipped with a Hewlett Packard 5975 MSD was used for sample analysis. The capillary column used was a Restek 20m by 0.18 mm ID by 1.0 µm film thickness (Restek Cat. # RTX-624). The trap used with the sample concentrator is an EST K Trap, 30cm packed with Carbopack B / Carboxen 1000 & 1001 (VOCARB 3000)

4. PREPARATION

Water samples were prepared by 8260B

5. ANALYSIS

A. Calibration:

Initial calibration met all acceptance criteria.

B. Blanks:

All acceptance criteria were met.

SDG NARRATIVE

C. Surrogates/Deuterated Monitoring Compounds (DMCs):

All acceptance criteria were met.

D. Spikes:

I. Laboratory Control Spikes (LCS)

Laboratory Control Spikes were not used for this method.

II. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD were not used for this method.

III. Internal Standards

All acceptance criteria were met.

E. Samples

Sample analysis proceeded normally.

Manual Integration Summary

The chemist manually integrated the following standards and samples: None.

Reason Codes:

A. Baseline integration, re-inforced due to interference on target peak.
B. Baseline integration, peak not properly integrated by software integrator.
C. Target peak was not properly identified, more than one peak in retention time window.
D. Split peak, more than one peak in retention time window.

I certify that this Sample Data Package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in the hard copy Sample Data Package and in the Electronic Data Deliverables has been authorized by the laboratory manager or the manager's designee, as verified by the following signatures.

Thomas Scott
Laboratory Manager

8-7-07
Date

3967

MATRIX: WATER	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container No.
RECEIVING LAB: ENVIROSYSTEMS		Shipping Info:
PROJECT/SITE: Powhatan USDA		ANL Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature)		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC	REMARKS
7.30.07	PHTI36-W-24351	12	X	
	PHTI08-W-24294	2	X	
	PHTI27-W-24283	2	X	
	PHQCTB-W-24356	2	X	

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	7.30.07	1800					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

ER-160 (4-01)

VOLATILE SAMPLE DATA

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PH TI36-W-24351

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG719

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070719-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF707.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/31/2007

% Moisture: not dec. Date Analyzed: 07/31/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PH TI36-W-24351

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG719

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070719-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF707.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/31/2007

% Moisture: not dec. Date Analyzed: 07/31/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PH TI08-W-24294

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG719

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070719-02

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF708.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/31/2007

% Moisture: not dec. Date Analyzed: 07/31/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PH TI08-W-24294

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG719

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070719-02

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF708.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/31/2007

% Moisture: not dec. Date Analyzed: 07/31/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PH TI27-W-24283

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG719

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070719-03

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF714.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/31/2007

% Moisture: not dec. Date Analyzed: 08/01/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	1.1	J
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	2.3	J
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PH TI27-W-24283

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG719

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070719-03

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF714.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/31/2007

% Moisture: not dec. Date Analyzed: 08/01/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PH QCTB-W-24356

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG719

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070719-04

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF715.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/31/2007

% Moisture: not dec. Date Analyzed: 08/01/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	3.8	J
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PH QCTB-W-24356

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG719

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070719-04

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF715.D

Level: (TRACE/LOW/MED) LOW Date Received: 07/31/2007

% Moisture: not dec. Date Analyzed: 08/01/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

ENVIROSYSTEMS, INC.

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Phone (410) 964-0330 • Fax (410) 740-9306
Email: info@envsystems.com • Webpage: www.envsystems.com/envsys

August 16, 2007

Jorge S. Alvarado, Ph.D
Argonne National Laboratory
Environmental Research Division
Applied Geoscience and Environmental
Management Section
9700 South Cass Avenue, ER-203
Argonne, Illinois 60439

RE: ENVSY Report 070256 & 070261 Powhattan CBD 8/19/07

Dear Jorge:

Enclosed are the results of analysis for the samples received on July 26, August 8, 2007 for volatile organics analysis by US EPA 8260B with a lower reporting limit of 5ug/L.

Please do not hesitate to call me if you have any questions, comments, or require additional information.

Sincerely,

Thomas Scott
FOR Mohan Khare, Ph.D
President/CEO

MK/ncc

SDG NARRATIVE

Envirosystems, Inc.

Contract: N/A
Client: Argonne National Laboratory
Work Order: 0070802
SDG: Arg70802

SAMPLE RECIEPT

Date received: Aug 08, 2007
Cooler Temperature: 3-deg C

Sample Summary

Client ID	Laboratory ID	Matrix	Fraction	pH
PHT141-W-24696	0070802-01	WATER	VOA	7
PHQCTB-W-24697	0070802-02	WATER	VOA	7

VOLATILES SECTION

1. **HOLDING TIMES**

   All holding times were met.

2. **METHODS**

   8260B/CLPLIKE

3. **INSTRUMENT AND CHROMATOGRAPHIC CONDITIONS**

   A Hewlett Packard 6890 gas chromatograph equipped with a Hewlett Packard 5975 MSD was used for sample analysis. The capillary column used was a Restek 20m by 0.18 mm ID by 1.0 µm film thickness (Restek Cat. # RTX-624). The trap used with the sample concentrator is an EST K Trap, 30cm packed with Carbopack B / Carboxen 1000 & 1001 (VOCARB 3000)

4. **PREPARATION**

   Water samples were prepared by 8260B

5. **ANALYSIS**

   A. **Calibration:**

      Initial calibration met all acceptance criteria.

   B. **Blanks:**

      All acceptance criteria were met.

SDG NARRATIVE

C. Surrogates/Deuterated Monitoring Compounds (DMCs):

All acceptance criteria were met.

D. Spikes:

I. Laboratory Control Spikes (LCS)

Laboratory Control Spikes were not used for this method.

II. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

MS/MSD were not used for this method.

III. Internal Standards

All acceptance criteria were met.

E. Samples

Sample analysis proceeded normally.

Manual Integration Summary

The chemist manually integrated the following standards and samples: None.

Reason Codes:

A. Baseline integration, re-inforced due to interference on target peak.
B. Baseline integration, peak not properly integrated by software integrator.
C. Target peak was not properly identified, more than one peak in retention time window.
D. Split peak, more than one peak in retention time window.

I certify that this Sample Data Package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in the hard copy Sample Data Package and in the Electronic Data Deliverables has been authorized by the laboratory manager or the manager's designee, as verified by the following signatures.

Thomas Scott
Laboratory Manager

8/16/07
Date

3978

MATRIX: WATER

RECEIVING LAB: ENVIROSYSTEMS

PROJECT/SITE: Powhatan USDA

SAMPLER(S) (Signature)

ARGONNE NATIONAL LABORATORY
CHAIN OF CUSTODY RECORD*

Shipping Container No.

Shipping Info:

ANL Field Contact (Name & Temporary Phone):

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC	REMARKS
8.3.07	PHTI41-W-24696	4	X	only 2 containers.
8.3.07	PHQCTB-W-24697	2	X	only 1 container

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	8.3.07	1600			08/08/07	10:20	

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
						5°C Temp

Y	N	FOR LAB USE ONLY
✓		Custody seal was intact when shipment received.
✓		Sample containers were intact when received.
✓		Shipment was at required temperature when received.
✓		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

ER-160 (4-01)

VOLATILE SAMPLE DATA

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHTI41-W-24696

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: Arg70802

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070802-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF735.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2007

% Moisture: not dec. Date Analyzed: 08/08/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHTI41-W-24696

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: Arg70802

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070802-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF735.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2007

% Moisture: not dec. Date Analyzed: 08/08/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHQCTB-W-24697

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: Arg70802

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070802-02RE1

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF740.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2007

% Moisture: not dec. Date Analyzed: 08/09/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	1.3	JB
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHQCTB-W-24697

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: Arg70802

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070802-02RE1

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF740.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/08/2007

% Moisture: not dec. Date Analyzed: 08/09/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

ENVIROSYSTEMS, INC.

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September 14, 2007

Jorge S. Alvarado, PH. D
Argonne National Laboratory
Environmental Research Division
Applied Geosciences and Environmental
Management Section
9700 South Cass Avenue, ER-203
Argonne, Illinois 60439

RE: Report #070264

Dear Jorge,

Enclosed is the Analytical Data Package for Organics Analysis for the samples received on August 17, 2007. These samples were analyzed by using method SW-846 8260B and USEPA CLP SOWOLM04.3 and the chain of custody instructions.

Please do not hesitate to call if you have any questions, comments, or require additional information.

Sincerely,

Thomas Scott

Mohan Khare Ph.D.
President/CEO

Enclosure (1)
MK/ncc

SDG NARRATIVE
VOLATILE ORGANICS (VOC)

Envirosystems, Inc.

Contract: N/A
Client: Argonne National Laboratory
Case: N/A
SDG: ARG70818

1. SAMPLE RECIEPT

Date received: 08-23-2007
Cooler Temperature: 2

Sample Summary

Client ID	Laboratory ID	Matrix	pH
PHMW11-W-24676	0070818-01	WATER	7
PHQCTB-W-24703	0070818-02	WATER	7

2. HOLDING TIMES

A. **Sample Preparation:** All holding times were met.
B. **Sample Analysis:** All holding times were met

3. METHODS

The samples were analyzed and reported by using method SW-846 8260B and USEPA CLP SOW OLM04.3 for target compound list.

4. INSTRUMENT AND CHROMATOGRAPHIC CONDITIONS

A Hewlett Packard 6890 gas chromatograph equipped with a Hewlett Packard 5975 MSD was used for sample analysis. The capillary column used was a Restek 20m by 0.18 mm ID by 1.0 µm film thickness (Restek Cat. # RTX-624). The trap used with the sample concentrator is an OI Analytical Trap #10, 30cm packed with Tenax/silica gel/cms (PN#228122).

5. PREPARATION

The submitted samples were analyzed as received.

6. ANALYSIS

A. Calibration:

I. Initial calibration

All acceptance criteria as stipulated by SW-846 8260b were met for all SPCC's and CCC's. All target compounds met the required percent RSD.

II. Blanks:

All acceptance criteria were met.

SDG NARRATIVE
VOLATILE ORGANICS (VOC)

II. Surrogates:

All acceptance criteria were met.

B. Spikes:

I. Laboratory Control Spikes (LCS)

LCS and LCSD samples were not analyzed.

II. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

The client did not request a MS/MSD.

C. Internal Standards:

All acceptance criteria were met.

D. Samples

Sample analysis proceeded normally.

I certify that this Sample Data Package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in the hard copy Sample Data Package and in the Electronic Data Deliverables has been authorized by the laboratory manager or the manager's designee, as verified by the following signatures.

Thomas Scott

Laboratory Manager

9-14-07

Date

3983

| | | |

VOLATILE SAMPLE DATA

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHMW11-W-24676

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG70817

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070818-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF828.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/24/2007

% Moisture: not dec. Date Analyzed: 08/29/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	9.3	
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	39	
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	150	
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHMW11-W-24676

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG70817

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070818-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF828.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/24/2007

% Moisture: not dec. Date Analyzed: 08/29/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHQCTB-W-24703

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG70817

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070818-02

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF829.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/24/2007

% Moisture: not dec. Date Analyzed: 08/29/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	13	
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
PHQCTB-W-24703

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG70817

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0070818-02

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: AG75HF829.D

Level: (TRACE/LOW/MED) LOW Date Received: 08/24/2007

% Moisture: not dec. Date Analyzed: 08/29/2007

GC Column: RTX-624 ID: .18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

August 16, 2007

STL

STL Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403

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www.stl-inc.com

Mr. Clyde Dennis
Argonne National Laboratory
9700 S. Cass Avenue
Building 203, Office 149
Argonne, IL 60439

Re: Laboratory Project No. 21005
Case: POWHAT; SDG: 121065

Dear Mr. Dennis:

Enclosed are analytical results for samples that were received by STL Burlington on July 26th, 2007. Laboratory identification numbers were assigned, and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 07/26/07 ETR No: 121065		
718758	24100	07/23/07	LIQUID
718759	24182 10A	07/23/07	LIQUID
718760	24234 7A	07/23/07	LIQUID
718761	24155 9A DUP1	07/23/07	LIQUID
718762	24201 31A	07/23/07	LIQUID
718763	24082 10A DUP1	07/23/07	LIQUID
718764	24071 20A DUP1	07/23/07	LIQUID
718765	24117 10A DUP1	07/23/07	LIQUID
718766	24093 10 DUP1	07/23/07	LIQUID
718767	24114 20A DUP1	07/23/07	LIQUID
718768	24232 10A	07/23/07	LIQUID
718769	24190 20A	07/23/07	LIQUID
718770	MEOH BLK	07/23/07	LIQUID

Documentation of the condition of the samples at the time of their receipt and any exception to the laboratory's Sample Acceptance Policy is documented in the Sample Handling section of this submittal. In order to accommodate field length limitations in processing the data summary forms, the laboratory did, in certain instances, abbreviate the sample identifier. The electronically formatted data provides for the full sample identifier.

The samples were analyzed by Method 8260B, using a low-level calibration. In performing the analytical work, 500 microliters of the methanol extract were added to the 5 milliliter purge volume. An additional, dilution analysis was performed on sample 24100 in order to provide for the quantification of carbon tetrachloride within the range of calibrated instrument response. Both sets of results for the analysis of sample 24100 are included in this submittal. Each of the analyses associated with the sample set did exhibit an acceptable internal standard performance.

With the exception of that for 1,2-dichloroethane-d_4 in the dilution analysis of sample 24100, there was an acceptable recovery of the surrogate controls in each of the analyses associated with the sample set. The recovery of 1,2-dichloroethane- d_4 in the referenced analysis was 78 percent. The lower control limit that is used by the laboratory in assessing the recovery performance of 1,2-dichloroethane-d_4 is 80 percent. Two types of laboratory control sample analyses were performed in the course of performing the primary analytical work. One was performed to evaluate method performance, and one was performed with 500 microliters of methanol added to the purge volume in order to characterize the affect on the analytical process. The target analytes were recovered well in the laboratory control sample analysis that defined method performance. In the laboratory control sample analysis with methanol, several of the earlier eluting compounds did exhibit a lower recovery performance, as did isobutyl alcohol, 2-hexanone, 1,2,4-trichlorobenzene, naphthalene, and 1,2,3-trichlorobenzene. Most profoundly affected was the performance of chloroethane (14 percent), acrolein (13 percent), allyl chloride (12 percent), and isobutyl alcohol (18 percent). Chloroform and carbon tetrachloride were recovered well in each of the laboratory control sample analyses. Two types of laboratory control sample analyses were also performed in the analytical sequence that provided for the dilution analysis of sample 24100. In that sequence the amount of methanol that was used in defining instrument performance was reduced to match the amount that was used in the dilution analysis of the sample. With the exception of that for 2-chloroethyl vinyl ether, there was an acceptable recovery of each target analyte in the laboratory control sample analysis that defined method performance. The recovery of 2-chloroethyl vinyl ether in that analysis was 43 percent. With the exception of those for chloroethane (55 percent) and trichlorofluoromethane (70 percent), there was an acceptable recovery of each target analyte in the laboratory control sample analysis that defined instrument performance. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. Relatively high concentrations of bromomethane, methyl iodide, 2-butanone, 1,1,1-trichloroethane, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, and 1,2,3-trichlorobenzene were identified in the analysis MEOHBLANK, as were trace concentrations of chloromethane, m&p-xylene, trans-1,4-dichloro-2-butene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, hexachlorobutadiene, and naphthalene. The laboratory did associate the analysis of MEOHBLANK with the analysis of each of the field samples in order to reference the blank association, and accordingly qualify the reported results. The instrument blanks that were analyzed in association with the samples were free of target analyte contamination.

The analytical results associated with the samples presented in this test report were generated under a quality system that adheres to requirements specified in the NELAC standard. Release of the data in this test report and any associated electronic deliverables is authorized by the Laboratory Director's designee as verified by the following signature.

If there are any questions regarding this submittal, please contact me at 802 660-1990.

Sincerely,

Kirk F. Young
Project Manager

Enclosure
KFY/hsf

STL Burlington Data Qualifier Definitions

Organic

U: Compound analyzed but not detected at a concentration above the reporting limit.

J: Estimated value.

N: Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds (TICs) where the identification of a compound is based on a mass spectral library search.

P: SW-846: Greater than 40% difference for detected concentrations between two GC columns. Unless otherwise specified the higher of the two values is reported on the Form I.

CLP SOW: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified the lower of the two values is reported on the Form I.

C: Pesticide result whose identification has been confirmed by GC/MS.

B: Analyte is found in the sample and the associated method blank. The flag is used for tentatively identified compounds as well as positively identified compounds.

E: Compounds whose concentrations exceed the upper limit of the calibration range of the instrument for that specific analysis.

D: Concentrations identified from analysis of the sample at a secondary dilution.

A: Tentatively identified compound is a suspected aldol condensation product.

X,Y,Z: Laboratory defined flags that may be used alone or combined, as needed. If used, the description of the flag is defined in the project narrative.

Inorganic/Metals

E: Reported value is estimated due to the presence of interference.

N: Matrix spike sample recovery is not within control limits.

* Duplicate sample analysis is not within control limits.

B: The result reported is less than the reporting limit but greater than the instrument detection limit.

U: Analyte was analyzed for but not detected above the reporting limit.

Method Codes:

P	ICP-AES
MS	ICP-MS
CV	Cold Vapor AA
AS	Semi-Automated Spectrophotometric

MATRIX: Soil in MeOH
RECEIVING LAB: STL
PROJECT/SITE: Powhatan
SAMPLER(S) (Signature): Lisa Larsens

ARGONNE NATIONAL LABORATORY
CHAIN OF CUSTODY RECORD*

Shipping Container No.
Shipping Info:
ANL Field Contact (Name & Temporary Phone): J. Alvarado 630 252-5267

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOAs	REMARKS
7/23/07	24100	1		11.796 g Soil + 10mL MeOH
	24182	1		11.618
	24234	1		12.424
	24155	1		11.725
	24201	1		11.675
	24082	1		11.637
	24071	1		12.353
	24117	1		11.364
	24093	1		11.769
	24114	1		12.030
	24232	1		10.630
	24190	1		11.406
	MeOH Blk	1		10mL

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
				M Turpin	07/24/07	10:44	
Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks	
Joy Celovecer	7/24/07	10:44		7-26-07	0930		

Y	N	FOR LAB USE ONLY
X		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

ER-160 (4-01)

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24071 20A DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718764

Sample wt/vol: 12.4 (g/mL) G Lab File ID: 718764E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.1	U
74-87-3	Chloromethane	7.3	JB
75-01-4	Vinyl Chloride	8.1	U
74-83-9	Bromomethane	6.4	JB
75-00-3	Chloroethane	8.1	U
75-69-4	Trichlorofluoromethane	8.1	U
107-02-8	Acrolein	40	U
75-35-4	1,1-Dichloroethene	8.1	U
76-13-1	Freon TF	8.1	U
67-64-1	Acetone	40	U
74-88-4	Methyl Iodide	3.4	JB
75-15-0	Carbon Disulfide	8.1	U
107-05-1	Allyl Chloride	8.1	U
75-09-2	Methylene Chloride	8.1	U
107-13-1	Acrylonitrile	8.1	U
156-60-5	trans-1,2-Dichloroethene	8.1	U
1634-04-4	Methyl-t-Butyl Ether	8.1	U
540-59-0	1,2-Dichloroethene (total)	8.1	U
75-34-3	1,1-Dichloroethane	8.1	U
108-05-4	Vinyl Acetate	8.1	U
126-99-8	Chloroprene	8.1	U
594-20-7	2,2-Dichloropropane	8.1	U
156-59-2	cis-1,2-Dichloroethene	8.1	U
78-93-3	2-Butanone	120	B
107-12-0	Propionitrile	32	U
74-97-5	Bromochloromethane	8.1	U
126-98-7	Methacrylonitrile	8.1	U
109-99-9	Tetrahydrofuran	110	U
67-66-3	Chloroform	8.1	U
71-55-6	1,1,1-Trichloroethane	8.1	U
56-23-5	Carbon Tetrachloride	8.1	U
563-58-6	1,1-Dichloropropene	8.1	U
71-43-2	Benzene	8.1	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24071 20A DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718764

Sample wt/vol: 12.4 (g/mL) G Lab File ID: 718764E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	400	U
107-06-2	1,2-Dichloroethane	8.1	U
79-01-6	Trichloroethene	8.1	U
78-87-5	1,2-Dichloropropane	8.1	U
74-95-3	Dibromomethane	8.1	U
80-62-6	Methyl Methacrylate	8.1	U
123-91-1	1,4-Dioxane	400	U
75-27-4	Bromodichloromethane	8.1	U
110-75-8	2-Chloroethyl Vinyl Ether	8.1	U
10061-01-5	cis-1,3-Dichloropropene	8.1	U
108-10-1	4-Methyl-2-pentanone	40	U
108-88-3	Toluene	8.1	U
10061-02-6	trans-1,3-Dichloropropene	8.1	U
97-63-2	Ethyl Methacrylate	8.1	U
79-00-5	1,1,2-Trichloroethane	8.1	U
127-18-4	Tetrachloroethene	8.1	U
142-28-9	1,3-Dichloropropane	8.1	U
591-78-6	2-Hexanone	40	U
124-48-1	Dibromochloromethane	8.1	U
106-93-4	1,2-Dibromoethane	8.1	U
108-90-7	Chlorobenzene	8.1	U
630-20-6	1,1,1,2-Tetrachloroethane	8.1	U
100-41-4	Ethylbenzene	8.1	U
1330-20-7	Xylene (m,p)	8.1	U
95-47-6	Xylene (o)	8.1	U
1330-20-7	Xylene (total)	8.1	U
100-42-5	Styrene	8.1	U
75-25-2	Bromoform	8.1	U
98-82-8	Isopropylbenzene	8.1	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.1	U
108-86-1	Bromobenzene	8.1	U
79-34-5	1,1,2,2-Tetrachloroethane	8.1	U
96-18-4	1,2,3-Trichloropropane	8.1	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24071 20A DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718764

Sample wt/vol: 12.4 (g/mL) G Lab File ID: 718764E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.1	U
103-65-1	n-Propylbenzene	8.1	U
95-49-8	2-Chlorotoluene	8.1	U
106-43-4	4-Chlorotoluene	8.1	U
108-67-8	1,3,5-Trimethylbenzene	8.1	U
98-06-6	tert-Butylbenzene	8.1	U
95-63-6	1,2,4-Trimethylbenzene	8.1	U
135-98-8	sec-Butylbenzene	8.1	U
541-73-1	1,3-Dichlorobenzene	8.1	U
99-87-6	4-Isopropyltoluene	8.1	U
106-46-7	1,4-Dichlorobenzene	8.1	U
95-50-1	1,2-Dichlorobenzene	8.1	U
104-51-8	n-Butylbenzene	8.1	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.1	U
120-82-1	1,2,4-Trichlorobenzene	8.1	U
87-68-3	Hexachlorobutadiene	8.1	U
91-20-3	Naphthalene	8.1	U
87-61-6	1,2,3-Trichlorobenzene	8.1	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24082 10A DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718763

Sample wt/vol: 11.6 (g/mL) G Lab File ID: 718763E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.6	U
74-87-3	Chloromethane	6.2	JB
75-01-4	Vinyl Chloride	8.6	U
74-83-9	Bromomethane	8.7	B
75-00-3	Chloroethane	8.6	U
75-69-4	Trichlorofluoromethane	8.6	U
107-02-8	Acrolein	43	U
75-35-4	1,1-Dichloroethene	8.6	U
76-13-1	Freon TF	8.6	U
67-64-1	Acetone	43	U
74-88-4	Methyl Iodide	5.4	JB
75-15-0	Carbon Disulfide	8.6	U
107-05-1	Allyl Chloride	8.6	U
75-09-2	Methylene Chloride	8.6	U
107-13-1	Acrylonitrile	8.6	U
156-60-5	trans-1,2-Dichloroethene	8.6	U
1634-04-4	Methyl-t-Butyl Ether	8.6	U
540-59-0	1,2-Dichloroethene (total)	8.6	U
75-34-3	1,1-Dichloroethane	8.6	U
108-05-4	Vinyl Acetate	8.6	U
126-99-8	Chloroprene	8.6	U
594-20-7	2,2-Dichloropropane	8.6	U
156-59-2	cis-1,2-Dichloroethene	8.6	U
78-93-3	2-Butanone	100	B
107-12-0	Propionitrile	34	U
74-97-5	Bromochloromethane	8.6	U
126-98-7	Methacrylonitrile	8.6	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	9.3	
71-55-6	1,1,1-Trichloroethane	8.6	U
56-23-5	Carbon Tetrachloride	210	
563-58-6	1,1-Dichloropropene	8.6	U
71-43-2	Benzene	8.6	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24082 10A DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718763

Sample wt/vol: 11.6 (g/mL) G Lab File ID: 718763E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	430	U
107-06-2	1,2-Dichloroethane	8.6	U
79-01-6	Trichloroethene	8.6	U
78-87-5	1,2-Dichloropropane	8.6	U
74-95-3	Dibromomethane	8.6	U
80-62-6	Methyl Methacrylate	8.6	U
123-91-1	1,4-Dioxane	430	U
75-27-4	Bromodichloromethane	8.6	U
110-75-8	2-Chloroethyl Vinyl Ether	8.6	U
10061-01-5	cis-1,3-Dichloropropene	8.6	U
108-10-1	4-Methyl-2-pentanone	43	U
108-88-3	Toluene	8.6	U
10061-02-6	trans-1,3-Dichloropropene	8.6	U
97-63-2	Ethyl Methacrylate	8.6	U
79-00-5	1,1,2-Trichloroethane	8.6	U
127-18-4	Tetrachloroethene	8.6	U
142-28-9	1,3-Dichloropropane	8.6	U
591-78-6	2-Hexanone	43	U
124-48-1	Dibromochloromethane	8.6	U
106-93-4	1,2-Dibromoethane	8.6	U
108-90-7	Chlorobenzene	8.6	U
630-20-6	1,1,1,2-Tetrachloroethane	8.6	U
100-41-4	Ethylbenzene	8.6	U
1330-20-7	Xylene (m,p)	8.6	U
95-47-6	Xylene (o)	8.6	U
1330-20-7	Xylene (total)	8.6	U
100-42-5	Styrene	8.6	U
75-25-2	Bromoform	8.6	U
98-82-8	Isopropylbenzene	8.6	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.6	U
108-86-1	Bromobenzene	8.6	U
79-34-5	1,1,2,2-Tetrachloroethane	8.6	U
96-18-4	1,2,3-Trichloropropane	8.6	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24082 10A DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718763

Sample wt/vol: 11.6 (g/mL) G Lab File ID: 718763E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.6	U
103-65-1	n-Propylbenzene	8.6	U
95-49-8	2-Chlorotoluene	8.6	U
106-43-4	4-Chlorotoluene	8.6	U
108-67-8	1,3,5-Trimethylbenzene	8.6	U
98-06-6	tert-Butylbenzene	8.6	U
95-63-6	1,2,4-Trimethylbenzene	8.6	U
135-98-8	sec-Butylbenzene	8.6	U
541-73-1	1,3-Dichlorobenzene	8.6	U
99-87-6	4-Isopropyltoluene	8.6	U
106-46-7	1,4-Dichlorobenzene	8.6	U
95-50-1	1,2-Dichlorobenzene	8.6	U
104-51-8	n-Butylbenzene	8.6	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.6	U
120-82-1	1,2,4-Trichlorobenzene	8.6	U
87-68-3	Hexachlorobutadiene	8.6	U
91-20-3	Naphthalene	8.6	U
87-61-6	1,2,3-Trichlorobenzene	8.6	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24093 10 DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718766

Sample wt/vol: 11.8 (g/mL) G Lab File ID: 718766E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.5	U
74-87-3	Chloromethane	4.8	JB
75-01-4	Vinyl Chloride	8.5	U
74-83-9	Bromomethane	5.1	JB
75-00-3	Chloroethane	8.5	U
75-69-4	Trichlorofluoromethane	8.5	U
107-02-8	Acrolein	42	U
75-35-4	1,1-Dichloroethene	8.5	U
76-13-1	Freon TF	8.5	U
67-64-1	Acetone	42	U
74-88-4	Methyl Iodide	2.7	JB
75-15-0	Carbon Disulfide	8.5	U
107-05-1	Allyl Chloride	8.5	U
75-09-2	Methylene Chloride	8.5	U
107-13-1	Acrylonitrile	8.5	U
156-60-5	trans-1,2-Dichloroethene	8.5	U
1634-04-4	Methyl-t-Butyl Ether	8.5	U
540-59-0	1,2-Dichloroethene (total)	8.5	U
75-34-3	1,1-Dichloroethane	8.5	U
108-05-4	Vinyl Acetate	8.5	U
126-99-8	Chloroprene	8.5	U
594-20-7	2,2-Dichloropropane	8.5	U
156-59-2	cis-1,2-Dichloroethene	8.5	U
78-93-3	2-Butanone	130	B
107-12-0	Propionitrile	34	U
74-97-5	Bromochloromethane	8.5	U
126-98-7	Methacrylonitrile	8.5	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	8.5	U
71-55-6	1,1,1-Trichloroethane	8.5	U
56-23-5	Carbon Tetrachloride	16	
563-58-6	1,1-Dichloropropene	8.5	U
71-43-2	Benzene	8.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24093 10 DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718766

Sample wt/vol: 11.8 (g/mL) G Lab File ID: 718766E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	420	U
107-06-2	1,2-Dichloroethane	8.5	U
79-01-6	Trichloroethene	8.5	U
78-87-5	1,2-Dichloropropane	8.5	U
74-95-3	Dibromomethane	8.5	U
80-62-6	Methyl Methacrylate	8.5	U
123-91-1	1,4-Dioxane	420	U
75-27-4	Bromodichloromethane	8.5	U
110-75-8	2-Chloroethyl Vinyl Ether	8.5	U
10061-01-5	cis-1,3-Dichloropropene	8.5	U
108-10-1	4-Methyl-2-pentanone	42	U
108-88-3	Toluene	8.5	U
10061-02-6	trans-1,3-Dichloropropene	8.5	U
97-63-2	Ethyl Methacrylate	8.5	U
79-00-5	1,1,2-Trichloroethane	8.5	U
127-18-4	Tetrachloroethene	8.5	U
142-28-9	1,3-Dichloropropane	8.5	U
591-78-6	2-Hexanone	42	U
124-48-1	Dibromochloromethane	8.5	U
106-93-4	1,2-Dibromoethane	8.5	U
108-90-7	Chlorobenzene	8.5	U
630-20-6	1,1,1,2-Tetrachloroethane	8.5	U
100-41-4	Ethylbenzene	8.5	U
1330-20-7	Xylene (m,p)	3.4	JB
95-47-6	Xylene (o)	8.5	U
1330-20-7	Xylene (total)	3.5	JB
100-42-5	Styrene	8.5	U
75-25-2	Bromoform	8.5	U
98-82-8	Isopropylbenzene	8.5	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.5	U
108-86-1	Bromobenzene	8.5	U
79-34-5	1,1,2,2-Tetrachloroethane	8.5	U
96-18-4	1,2,3-Trichloropropane	8.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24093 10 DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718766

Sample wt/vol: 11.8 (g/mL) G Lab File ID: 718766E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.5	U
103-65-1	n-Propylbenzene	8.5	U
95-49-8	2-Chlorotoluene	8.5	U
106-43-4	4-Chlorotoluene	8.5	U
108-67-8	1,3,5-Trimethylbenzene	8.5	U
98-06-6	tert-Butylbenzene	8.5	U
95-63-6	1,2,4-Trimethylbenzene	8.5	U
135-98-8	sec-Butylbenzene	8.5	U
541-73-1	1,3-Dichlorobenzene	8.5	U
99-87-6	4-Isopropyltoluene	8.5	U
106-46-7	1,4-Dichlorobenzene	8.5	U
95-50-1	1,2-Dichlorobenzene	8.5	U
104-51-8	n-Butylbenzene	8.5	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.5	U
120-82-1	1,2,4-Trichlorobenzene	8.5	U
87-68-3	Hexachlorobutadiene	8.5	U
91-20-3	Naphthalene	8.5	U
87-61-6	1,2,3-Trichlorobenzene	8.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24100

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718758

Sample wt/vol: 11.8 (g/mL) G Lab File ID: 718758E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.5	U
74-87-3	Chloromethane	6.1	JB
75-01-4	Vinyl Chloride	8.5	U
74-83-9	Bromomethane	6.1	JB
75-00-3	Chloroethane	8.5	U
75-69-4	Trichlorofluoromethane	8.5	U
107-02-8	Acrolein	42	U
75-35-4	1,1-Dichloroethene	8.5	U
76-13-1	Freon TF	8.5	U
67-64-1	Acetone	42	U
74-88-4	Methyl Iodide	8.5	B
75-15-0	Carbon Disulfide	8.5	U
107-05-1	Allyl Chloride	8.5	U
75-09-2	Methylene Chloride	8.5	U
107-13-1	Acrylonitrile	8.5	U
156-60-5	trans-1,2-Dichloroethene	8.5	U
1634-04-4	Methyl-t-Butyl Ether	8.5	U
540-59-0	1,2-Dichloroethene (total)	8.5	U
75-34-3	1,1-Dichloroethane	8.5	U
108-05-4	Vinyl Acetate	8.5	U
126-99-8	Chloroprene	8.5	U
594-20-7	2,2-Dichloropropane	8.5	U
156-59-2	cis-1,2-Dichloroethene	8.5	U
78-93-3	2-Butanone	91	B
107-12-0	Propionitrile	34	U
74-97-5	Bromochloromethane	8.5	U
126-98-7	Methacrylonitrile	8.5	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	35	
71-55-6	1,1,1-Trichloroethane	8.5	U
56-23-5	Carbon Tetrachloride	1200	E
563-58-6	1,1-Dichloropropene	8.5	U
71-43-2	Benzene	8.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24100

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718758

Sample wt/vol: 11.8 (g/mL) G Lab File ID: 718758E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	420	U
107-06-2	1,2-Dichloroethane	8.5	U
79-01-6	Trichloroethene	8.5	U
78-87-5	1,2-Dichloropropane	8.5	U
74-95-3	Dibromomethane	8.5	U
80-62-6	Methyl Methacrylate	8.5	U
123-91-1	1,4-Dioxane	420	U
75-27-4	Bromodichloromethane	8.5	U
110-75-8	2-Chloroethyl Vinyl Ether	8.5	U
10061-01-5	cis-1,3-Dichloropropene	8.5	U
108-10-1	4-Methyl-2-pentanone	42	U
108-88-3	Toluene	8.5	U
10061-02-6	trans-1,3-Dichloropropene	8.5	U
97-63-2	Ethyl Methacrylate	8.5	U
79-00-5	1,1,2-Trichloroethane	8.5	U
127-18-4	Tetrachloroethene	8.5	U
142-28-9	1,3-Dichloropropane	8.5	U
591-78-6	2-Hexanone	42	U
124-48-1	Dibromochloromethane	8.5	U
106-93-4	1,2-Dibromoethane	8.5	U
108-90-7	Chlorobenzene	8.5	U
630-20-6	1,1,1,2-Tetrachloroethane	8.5	U
100-41-4	Ethylbenzene	8.5	U
1330-20-7	Xylene (m,p)	4.1	JB
95-47-6	Xylene (o)	8.5	U
1330-20-7	Xylene (total)	4.3	JB
100-42-5	Styrene	8.5	U
75-25-2	Bromoform	8.5	U
98-82-8	Isopropylbenzene	8.5	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.5	U
108-86-1	Bromobenzene	8.5	U
79-34-5	1,1,2,2-Tetrachloroethane	8.5	U
96-18-4	1,2,3-Trichloropropane	8.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24100

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718758

Sample wt/vol: 11.8 (g/mL) G Lab File ID: 718758E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.5	U
103-65-1	n-Propylbenzene	8.5	U
95-49-8	2-Chlorotoluene	8.5	U
106-43-4	4-Chlorotoluene	8.5	U
108-67-8	1,3,5-Trimethylbenzene	8.5	U
98-06-6	tert-Butylbenzene	8.5	U
95-63-6	1,2,4-Trimethylbenzene	8.5	U
135-98-8	sec-Butylbenzene	8.5	U
541-73-1	1,3-Dichlorobenzene	8.5	U
99-87-6	4-Isopropyltoluene	8.5	U
106-46-7	1,4-Dichlorobenzene	3.9	JB
95-50-1	1,2-Dichlorobenzene	8.5	U
104-51-8	n-Butylbenzene	8.5	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.5	U
120-82-1	1,2,4-Trichlorobenzene	8.5	U
87-68-3	Hexachlorobutadiene	8.5	U
91-20-3	Naphthalene	8.5	U
87-61-6	1,2,3-Trichlorobenzene	8.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24100DL

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718758D1

Sample wt/vol: 11.8 (g/mL) G Lab File ID: 718758E2

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 3.1

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	26	U
74-87-3	Chloromethane	26	U
75-01-4	Vinyl Chloride	26	U
74-83-9	Bromomethane	26	U
75-00-3	Chloroethane	26	U
75-69-4	Trichlorofluoromethane	26	U
107-02-8	Acrolein	130	U
75-35-4	1,1-Dichloroethene	26	U
76-13-1	Freon TF	26	U
67-64-1	Acetone	130	U
74-88-4	Methyl Iodide	26	U
75-15-0	Carbon Disulfide	26	U
107-05-1	Allyl Chloride	26	U
75-09-2	Methylene Chloride	26	U
107-13-1	Acrylonitrile	26	U
156-60-5	trans-1,2-Dichloroethene	26	U
1634-04-4	Methyl-t-Butyl Ether	26	U
540-59-0	1,2-Dichloroethene (total)	26	U
75-34-3	1,1-Dichloroethane	26	U
108-05-4	Vinyl Acetate	26	U
126-99-8	Chloroprene	26	U
594-20-7	2,2-Dichloropropane	26	U
156-59-2	cis-1,2-Dichloroethene	26	U
78-93-3	2-Butanone	89	DJB
107-12-0	Propionitrile	110	U
74-97-5	Bromochloromethane	26	U
126-98-7	Methacrylonitrile	26	U
109-99-9	Tetrahydrofuran	370	U
67-66-3	Chloroform	38	D
71-55-6	1,1,1-Trichloroethane	26	U
56-23-5	Carbon Tetrachloride	1100	D
563-58-6	1,1-Dichloropropene	26	U
71-43-2	Benzene	26	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24100DL

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718758D1

Sample wt/vol: 11.8 (g/mL) G Lab File ID: 718758E2

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 3.1

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	1300	U
107-06-2	1,2-Dichloroethane	26	U
79-01-6	Trichloroethene	26	U
78-87-5	1,2-Dichloropropane	26	U
74-95-3	Dibromomethane	26	U
80-62-6	Methyl Methacrylate	26	U
123-91-1	1,4-Dioxane	1300	U
75-27-4	Bromodichloromethane	26	U
110-75-8	2-Chloroethyl Vinyl Ether	26	U
10061-01-5	cis-1,3-Dichloropropene	26	U
108-10-1	4-Methyl-2-pentanone	130	U
108-88-3	Toluene	26	U
10061-02-6	trans-1,3-Dichloropropene	26	U
97-63-2	Ethyl Methacrylate	26	U
79-00-5	1,1,2-Trichloroethane	26	U
127-18-4	Tetrachloroethene	26	U
142-28-9	1,3-Dichloropropane	26	U
591-78-6	2-Hexanone	130	U
124-48-1	Dibromochloromethane	26	U
106-93-4	1,2-Dibromoethane	26	U
108-90-7	Chlorobenzene	26	U
630-20-6	1,1,1,2-Tetrachloroethane	26	U
100-41-4	Ethylbenzene	26	U
1330-20-7	Xylene (m,p)	26	U
95-47-6	Xylene (o)	26	U
1330-20-7	Xylene (total)	26	U
100-42-5	Styrene	26	U
75-25-2	Bromoform	26	U
98-82-8	Isopropylbenzene	26	U
1476-11-5	cis-1,4-Dichloro-2-butene	26	U
108-86-1	Bromobenzene	26	U
79-34-5	1,1,2,2-Tetrachloroethane	26	U
96-18-4	1,2,3-Trichloropropane	26	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24100DL

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718758D1

Sample wt/vol: 11.8 (g/mL) G Lab File ID: 718758E2

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 3.1

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	26	U
103-65-1	n-Propylbenzene	26	U
95-49-8	2-Chlorotoluene	26	U
106-43-4	4-Chlorotoluene	26	U
108-67-8	1,3,5-Trimethylbenzene	26	U
98-06-6	tert-Butylbenzene	26	U
95-63-6	1,2,4-Trimethylbenzene	26	U
135-98-8	sec-Butylbenzene	26	U
541-73-1	1,3-Dichlorobenzene	26	U
99-87-6	4-Isopropyltoluene	26	U
106-46-7	1,4-Dichlorobenzene	26	U
95-50-1	1,2-Dichlorobenzene	26	U
104-51-8	n-Butylbenzene	26	U
96-12-8	1,2-Dibromo-3-Chloropropane	26	U
120-82-1	1,2,4-Trichlorobenzene	26	U
87-68-3	Hexachlorobutadiene	26	U
91-20-3	Naphthalene	26	U
87-61-6	1,2,3-Trichlorobenzene	26	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24114 20A DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718767

Sample wt/vol: 12.0 (g/mL) G Lab File ID: 718767E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.3	U
74-87-3	Chloromethane	2.9	JB
75-01-4	Vinyl Chloride	8.3	U
74-83-9	Bromomethane	3.5	JB
75-00-3	Chloroethane	8.3	U
75-69-4	Trichlorofluoromethane	8.3	U
107-02-8	Acrolein	42	U
75-35-4	1,1-Dichloroethene	8.3	U
76-13-1	Freon TF	8.3	U
67-64-1	Acetone	42	U
74-88-4	Methyl Iodide	3.8	JB
75-15-0	Carbon Disulfide	8.3	U
107-05-1	Allyl Chloride	8.3	U
75-09-2	Methylene Chloride	8.3	U
107-13-1	Acrylonitrile	8.3	U
156-60-5	trans-1,2-Dichloroethene	8.3	U
1634-04-4	Methyl-t-Butyl Ether	8.3	U
540-59-0	1,2-Dichloroethene (total)	8.3	U
75-34-3	1,1-Dichloroethane	8.3	U
108-05-4	Vinyl Acetate	8.3	U
126-99-8	Chloroprene	8.3	U
594-20-7	2,2-Dichloropropane	8.3	U
156-59-2	cis-1,2-Dichloroethene	8.3	U
78-93-3	2-Butanone	100	B
107-12-0	Propionitrile	33	U
74-97-5	Bromochloromethane	8.3	U
126-98-7	Methacrylonitrile	8.3	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	8.3	U
71-55-6	1,1,1-Trichloroethane	8.3	U
56-23-5	Carbon Tetrachloride	8.3	U
563-58-6	1,1-Dichloropropene	8.3	U
71-43-2	Benzene	8.3	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24114 20A DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718767

Sample wt/vol: 12.0 (g/mL) G Lab File ID: 718767E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	420	U
107-06-2	1,2-Dichloroethane	8.3	U
79-01-6	Trichloroethene	8.3	U
78-87-5	1,2-Dichloropropane	8.3	U
74-95-3	Dibromomethane	8.3	U
80-62-6	Methyl Methacrylate	8.3	U
123-91-1	1,4-Dioxane	420	U
75-27-4	Bromodichloromethane	8.3	U
110-75-8	2-Chloroethyl Vinyl Ether	8.3	U
10061-01-5	cis-1,3-Dichloropropene	8.3	U
108-10-1	4-Methyl-2-pentanone	42	U
108-88-3	Toluene	2.5	J
10061-02-6	trans-1,3-Dichloropropene	8.3	U
97-63-2	Ethyl Methacrylate	8.3	U
79-00-5	1,1,2-Trichloroethane	8.3	U
127-18-4	Tetrachloroethene	8.3	U
142-28-9	1,3-Dichloropropane	8.3	U
591-78-6	2-Hexanone	42	U
124-48-1	Dibromochloromethane	8.3	U
106-93-4	1,2-Dibromoethane	8.3	U
108-90-7	Chlorobenzene	8.3	U
630-20-6	1,1,1,2-Tetrachloroethane	8.3	U
100-41-4	Ethylbenzene	8.3	U
1330-20-7	Xylene (m,p)	3.5	JB
95-47-6	Xylene (o)	8.3	U
1330-20-7	Xylene (total)	3.6	JB
100-42-5	Styrene	8.3	U
75-25-2	Bromoform	8.3	U
98-82-8	Isopropylbenzene	8.3	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.3	U
108-86-1	Bromobenzene	8.3	U
79-34-5	1,1,2,2-Tetrachloroethane	8.3	U
96-18-4	1,2,3-Trichloropropane	8.3	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24114 20A DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718767

Sample wt/vol: 12.0 (g/mL) G Lab File ID: 718767E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.3	U
103-65-1	n-Propylbenzene	8.3	U
95-49-8	2-Chlorotoluene	8.3	U
106-43-4	4-Chlorotoluene	8.3	U
108-67-8	1,3,5-Trimethylbenzene	8.3	U
98-06-6	tert-Butylbenzene	8.3	U
95-63-6	1,2,4-Trimethylbenzene	8.3	U
135-98-8	sec-Butylbenzene	8.3	U
541-73-1	1,3-Dichlorobenzene	8.3	U
99-87-6	4-Isopropyltoluene	8.3	U
106-46-7	1,4-Dichlorobenzene	8.3	U
95-50-1	1,2-Dichlorobenzene	8.3	U
104-51-8	n-Butylbenzene	8.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.3	U
120-82-1	1,2,4-Trichlorobenzene	8.3	U
87-68-3	Hexachlorobutadiene	8.3	U
91-20-3	Naphthalene	8.3	U
87-61-6	1,2,3-Trichlorobenzene	8.3	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24117 10A DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718765

Sample wt/vol: 11.4 (g/mL) G Lab File ID: 718765E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.8	U
74-87-3	Chloromethane	6.2	JB
75-01-4	Vinyl Chloride	8.8	U
74-83-9	Bromomethane	9.4	B
75-00-3	Chloroethane	8.8	U
75-69-4	Trichlorofluoromethane	8.8	U
107-02-8	Acrolein	44	U
75-35-4	1,1-Dichloroethene	8.8	U
76-13-1	Freon TF	8.8	U
67-64-1	Acetone	44	U
74-88-4	Methyl Iodide	5.5	JB
75-15-0	Carbon Disulfide	8.8	U
107-05-1	Allyl Chloride	8.8	U
75-09-2	Methylene Chloride	8.8	U
107-13-1	Acrylonitrile	8.8	U
156-60-5	trans-1,2-Dichloroethene	8.8	U
1634-04-4	Methyl-t-Butyl Ether	8.8	U
540-59-0	1,2-Dichloroethene (total)	8.8	U
75-34-3	1,1-Dichloroethane	8.8	U
108-05-4	Vinyl Acetate	8.8	U
126-99-8	Chloroprene	8.8	U
594-20-7	2,2-Dichloropropane	8.8	U
156-59-2	cis-1,2-Dichloroethene	8.8	U
78-93-3	2-Butanone	93	B
107-12-0	Propionitrile	35	U
74-97-5	Bromochloromethane	8.8	U
126-98-7	Methacrylonitrile	8.8	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	8.8	U
71-55-6	1,1,1-Trichloroethane	8.8	U
56-23-5	Carbon Tetrachloride	8.8	U
563-58-6	1,1-Dichloropropene	8.8	U
71-43-2	Benzene	8.8	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24117 10A DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718765

Sample wt/vol: 11.4 (g/mL) G Lab File ID: 718765E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	440	U
107-06-2	1,2-Dichloroethane	8.8	U
79-01-6	Trichloroethene	8.8	U
78-87-5	1,2-Dichloropropane	8.8	U
74-95-3	Dibromomethane	8.8	U
80-62-6	Methyl Methacrylate	8.8	U
123-91-1	1,4-Dioxane	440	U
75-27-4	Bromodichloromethane	8.8	U
110-75-8	2-Chloroethyl Vinyl Ether	8.8	U
10061-01-5	cis-1,3-Dichloropropene	8.8	U
108-10-1	4-Methyl-2-pentanone	44	U
108-88-3	Toluene	8.8	U
10061-02-6	trans-1,3-Dichloropropene	8.8	U
97-63-2	Ethyl Methacrylate	8.8	U
79-00-5	1,1,2-Trichloroethane	8.8	U
127-18-4	Tetrachloroethene	8.8	U
142-28-9	1,3-Dichloropropane	8.8	U
591-78-6	2-Hexanone	44	U
124-48-1	Dibromochloromethane	8.8	U
106-93-4	1,2-Dibromoethane	8.8	U
108-90-7	Chlorobenzene	8.8	U
630-20-6	1,1,1,2-Tetrachloroethane	8.8	U
100-41-4	Ethylbenzene	8.8	U
1330-20-7	Xylene (m,p)	8.8	U
95-47-6	Xylene (o)	8.8	U
1330-20-7	Xylene (total)	8.8	U
100-42-5	Styrene	8.8	U
75-25-2	Bromoform	8.8	U
98-82-8	Isopropylbenzene	8.8	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.8	U
108-86-1	Bromobenzene	8.8	U
79-34-5	1,1,2,2-Tetrachloroethane	8.8	U
96-18-4	1,2,3-Trichloropropane	8.8	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24117 10A DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718765

Sample wt/vol: 11.4 (g/mL) G Lab File ID: 718765E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.8	U
103-65-1	n-Propylbenzene	8.8	U
95-49-8	2-Chlorotoluene	8.8	U
106-43-4	4-Chlorotoluene	8.8	U
108-67-8	1,3,5-Trimethylbenzene	8.8	U
98-06-6	tert-Butylbenzene	8.8	U
95-63-6	1,2,4-Trimethylbenzene	8.8	U
135-98-8	sec-Butylbenzene	8.8	U
541-73-1	1,3-Dichlorobenzene	8.8	U
99-87-6	4-Isopropyltoluene	8.8	U
106-46-7	1,4-Dichlorobenzene	8.8	U
95-50-1	1,2-Dichlorobenzene	8.8	U
104-51-8	n-Butylbenzene	8.8	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.8	U
120-82-1	1,2,4-Trichlorobenzene	8.8	U
87-68-3	Hexachlorobutadiene	8.8	U
91-20-3	Naphthalene	8.8	U
87-61-6	1,2,3-Trichlorobenzene	8.8	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24155 9A DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718761

Sample wt/vol: 11.7 (g/mL) G Lab File ID: 718761E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.5	U
74-87-3	Chloromethane	6.0	JB
75-01-4	Vinyl Chloride	8.5	U
74-83-9	Bromomethane	8.7	B
75-00-3	Chloroethane	8.5	U
75-69-4	Trichlorofluoromethane	8.5	U
107-02-8	Acrolein	43	U
75-35-4	1,1-Dichloroethene	8.5	U
76-13-1	Freon TF	8.5	U
67-64-1	Acetone	43	U
74-88-4	Methyl Iodide	7.9	JB
75-15-0	Carbon Disulfide	8.5	U
107-05-1	Allyl Chloride	8.5	U
75-09-2	Methylene Chloride	8.5	U
107-13-1	Acrylonitrile	8.5	U
156-60-5	trans-1,2-Dichloroethene	8.5	U
1634-04-4	Methyl-t-Butyl Ether	8.5	U
540-59-0	1,2-Dichloroethene (total)	8.5	U
75-34-3	1,1-Dichloroethane	8.5	U
108-05-4	Vinyl Acetate	8.5	U
126-99-8	Chloroprene	8.5	U
594-20-7	2,2-Dichloropropane	8.5	U
156-59-2	cis-1,2-Dichloroethene	8.5	U
78-93-3	2-Butanone	84	B
107-12-0	Propionitrile	34	U
74-97-5	Bromochloromethane	8.5	U
126-98-7	Methacrylonitrile	8.5	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	8.5	U
71-55-6	1,1,1-Trichloroethane	8.5	U
56-23-5	Carbon Tetrachloride	6.5	J
563-58-6	1,1-Dichloropropene	8.5	U
71-43-2	Benzene	8.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24155 9A DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718761

Sample wt/vol: 11.7 (g/mL) G Lab File ID: 718761E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	430	U
107-06-2	1,2-Dichloroethane	8.5	U
79-01-6	Trichloroethene	8.5	U
78-87-5	1,2-Dichloropropane	8.5	U
74-95-3	Dibromomethane	8.5	U
80-62-6	Methyl Methacrylate	8.5	U
123-91-1	1,4-Dioxane	430	U
75-27-4	Bromodichloromethane	8.5	U
110-75-8	2-Chloroethyl Vinyl Ether	8.5	U
10061-01-5	cis-1,3-Dichloropropene	8.5	U
108-10-1	4-Methyl-2-pentanone	43	U
108-88-3	Toluene	8.5	U
10061-02-6	trans-1,3-Dichloropropene	8.5	U
97-63-2	Ethyl Methacrylate	8.5	U
79-00-5	1,1,2-Trichloroethane	8.5	U
127-18-4	Tetrachloroethene	8.5	U
142-28-9	1,3-Dichloropropane	8.5	U
591-78-6	2-Hexanone	43	U
124-48-1	Dibromochloromethane	8.5	U
106-93-4	1,2-Dibromoethane	8.5	U
108-90-7	Chlorobenzene	8.5	U
630-20-6	1,1,1,2-Tetrachloroethane	8.5	U
100-41-4	Ethylbenzene	8.5	U
1330-20-7	Xylene (m,p)	8.5	U
95-47-6	Xylene (o)	8.5	U
1330-20-7	Xylene (total)	8.5	U
100-42-5	Styrene	8.5	U
75-25-2	Bromoform	8.5	U
98-82-8	Isopropylbenzene	8.5	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.5	U
108-86-1	Bromobenzene	8.5	U
79-34-5	1,1,2,2-Tetrachloroethane	8.5	U
96-18-4	1,2,3-Trichloropropane	8.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24155 9A DUP1

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718761

Sample wt/vol: 11.7 (g/mL) G Lab File ID: 718761E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.5	U
103-65-1	n-Propylbenzene	8.5	U
95-49-8	2-Chlorotoluene	8.5	U
106-43-4	4-Chlorotoluene	8.5	U
108-67-8	1,3,5-Trimethylbenzene	8.5	U
98-06-6	tert-Butylbenzene	8.5	U
95-63-6	1,2,4-Trimethylbenzene	8.5	U
135-98-8	sec-Butylbenzene	8.5	U
541-73-1	1,3-Dichlorobenzene	8.5	U
99-87-6	4-Isopropyltoluene	8.5	U
106-46-7	1,4-Dichlorobenzene	8.5	U
95-50-1	1,2-Dichlorobenzene	8.5	U
104-51-8	n-Butylbenzene	8.5	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.5	U
120-82-1	1,2,4-Trichlorobenzene	8.5	U
87-68-3	Hexachlorobutadiene	8.5	U
91-20-3	Naphthalene	8.5	U
87-61-6	1,2,3-Trichlorobenzene	8.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24182 10A

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718759

Sample wt/vol: 11.6 (g/mL) G Lab File ID: 718759E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.6	U
74-87-3	Chloromethane	5.7	JB
75-01-4	Vinyl Chloride	8.6	U
74-83-9	Bromomethane	6.2	JB
75-00-3	Chloroethane	8.6	U
75-69-4	Trichlorofluoromethane	8.6	U
107-02-8	Acrolein	43	U
75-35-4	1,1-Dichloroethene	8.6	U
76-13-1	Freon TF	8.6	U
67-64-1	Acetone	43	U
74-88-4	Methyl Iodide	7.2	JB
75-15-0	Carbon Disulfide	8.6	U
107-05-1	Allyl Chloride	8.6	U
75-09-2	Methylene Chloride	8.6	U
107-13-1	Acrylonitrile	8.6	U
156-60-5	trans-1,2-Dichloroethene	8.6	U
1634-04-4	Methyl-t-Butyl Ether	8.6	U
540-59-0	1,2-Dichloroethene (total)	8.6	U
75-34-3	1,1-Dichloroethane	8.6	U
108-05-4	Vinyl Acetate	8.6	U
126-99-8	Chloroprene	8.6	U
594-20-7	2,2-Dichloropropane	8.6	U
156-59-2	cis-1,2-Dichloroethene	8.6	U
78-93-3	2-Butanone	94	B
107-12-0	Propionitrile	34	U
74-97-5	Bromochloromethane	8.6	U
126-98-7	Methacrylonitrile	8.6	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	8.6	U
71-55-6	1,1,1-Trichloroethane	8.6	U
56-23-5	Carbon Tetrachloride	8.6	U
563-58-6	1,1-Dichloropropene	8.6	U
71-43-2	Benzene	8.6	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24182 10A

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718759

Sample wt/vol: 11.6 (g/mL) G Lab File ID: 718759E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	430	U
107-06-2	1,2-Dichloroethane	8.6	U
79-01-6	Trichloroethene	8.6	U
78-87-5	1,2-Dichloropropane	8.6	U
74-95-3	Dibromomethane	8.6	U
80-62-6	Methyl Methacrylate	8.6	U
123-91-1	1,4-Dioxane	430	U
75-27-4	Bromodichloromethane	8.6	U
110-75-8	2-Chloroethyl Vinyl Ether	8.6	U
10061-01-5	cis-1,3-Dichloropropene	8.6	U
108-10-1	4-Methyl-2-pentanone	43	U
108-88-3	Toluene	8.6	U
10061-02-6	trans-1,3-Dichloropropene	8.6	U
97-63-2	Ethyl Methacrylate	8.6	U
79-00-5	1,1,2-Trichloroethane	8.6	U
127-18-4	Tetrachloroethene	8.6	U
142-28-9	1,3-Dichloropropane	8.6	U
591-78-6	2-Hexanone	43	U
124-48-1	Dibromochloromethane	8.6	U
106-93-4	1,2-Dibromoethane	8.6	U
108-90-7	Chlorobenzene	8.6	U
630-20-6	1,1,1,2-Tetrachloroethane	8.6	U
100-41-4	Ethylbenzene	8.6	U
1330-20-7	Xylene (m,p)	4.2	JB
95-47-6	Xylene (o)	8.6	U
1330-20-7	Xylene (total)	4.4	JB
100-42-5	Styrene	8.6	U
75-25-2	Bromoform	8.6	U
98-82-8	Isopropylbenzene	8.6	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.6	U
108-86-1	Bromobenzene	8.6	U
79-34-5	1,1,2,2-Tetrachloroethane	8.6	U
96-18-4	1,2,3-Trichloropropane	8.6	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24182 10A

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718759

Sample wt/vol: 11.6 (g/mL) G Lab File ID: 718759E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.6	U
103-65-1	n-Propylbenzene	8.6	U
95-49-8	2-Chlorotoluene	8.6	U
106-43-4	4-Chlorotoluene	8.6	U
108-67-8	1,3,5-Trimethylbenzene	8.6	U
98-06-6	tert-Butylbenzene	8.6	U
95-63-6	1,2,4-Trimethylbenzene	8.6	U
135-98-8	sec-Butylbenzene	8.6	U
541-73-1	1,3-Dichlorobenzene	8.6	U
99-87-6	4-Isopropyltoluene	8.6	U
106-46-7	1,4-Dichlorobenzene	8.6	U
95-50-1	1,2-Dichlorobenzene	8.6	U
104-51-8	n-Butylbenzene	8.6	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.6	U
120-82-1	1,2,4-Trichlorobenzene	8.6	U
87-68-3	Hexachlorobutadiene	8.6	U
91-20-3	Naphthalene	8.6	U
87-61-6	1,2,3-Trichlorobenzene	8.6	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24190 20A

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718769

Sample wt/vol: 11.4 (g/mL) G Lab File ID: 718769E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.8	U
74-87-3	Chloromethane	4.9	JB
75-01-4	Vinyl Chloride	8.8	U
74-83-9	Bromomethane	3.6	JB
75-00-3	Chloroethane	8.8	U
75-69-4	Trichlorofluoromethane	8.8	U
107-02-8	Acrolein	44	U
75-35-4	1,1-Dichloroethene	8.8	U
76-13-1	Freon TF	8.8	U
67-64-1	Acetone	44	U
74-88-4	Methyl Iodide	3.5	JB
75-15-0	Carbon Disulfide	8.8	U
107-05-1	Allyl Chloride	8.8	U
75-09-2	Methylene Chloride	8.8	U
107-13-1	Acrylonitrile	8.8	U
156-60-5	trans-1,2-Dichloroethene	8.8	U
1634-04-4	Methyl-t-Butyl Ether	8.8	U
540-59-0	1,2-Dichloroethene (total)	8.8	U
75-34-3	1,1-Dichloroethane	8.8	U
108-05-4	Vinyl Acetate	8.8	U
126-99-8	Chloroprene	8.8	U
594-20-7	2,2-Dichloropropane	8.8	U
156-59-2	cis-1,2-Dichloroethene	8.8	U
78-93-3	2-Butanone	90	B
107-12-0	Propionitrile	35	U
74-97-5	Bromochloromethane	8.8	U
126-98-7	Methacrylonitrile	8.8	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	8.8	U
71-55-6	1,1,1-Trichloroethane	8.8	U
56-23-5	Carbon Tetrachloride	8.8	U
563-58-6	1,1-Dichloropropene	8.8	U
71-43-2	Benzene	8.8	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24190 20A

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718769

Sample wt/vol: 11.4 (g/mL) G Lab File ID: 718769E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	440	U
107-06-2	1,2-Dichloroethane	8.8	U
79-01-6	Trichloroethene	8.8	U
78-87-5	1,2-Dichloropropane	8.8	U
74-95-3	Dibromomethane	8.8	U
80-62-6	Methyl Methacrylate	8.8	U
123-91-1	1,4-Dioxane	440	U
75-27-4	Bromodichloromethane	8.8	U
110-75-8	2-Chloroethyl Vinyl Ether	8.8	U
10061-01-5	cis-1,3-Dichloropropene	8.8	U
108-10-1	4-Methyl-2-pentanone	44	U
108-88-3	Toluene	8.8	U
10061-02-6	trans-1,3-Dichloropropene	8.8	U
97-63-2	Ethyl Methacrylate	8.8	U
79-00-5	1,1,2-Trichloroethane	8.8	U
127-18-4	Tetrachloroethene	8.8	U
142-28-9	1,3-Dichloropropane	8.8	U
591-78-6	2-Hexanone	44	U
124-48-1	Dibromochloromethane	8.8	U
106-93-4	1,2-Dibromoethane	8.8	U
108-90-7	Chlorobenzene	8.8	U
630-20-6	1,1,1,2-Tetrachloroethane	8.8	U
100-41-4	Ethylbenzene	8.8	U
1330-20-7	Xylene (m,p)	3.7	JB
95-47-6	Xylene (o)	8.8	U
1330-20-7	Xylene (total)	3.9	JB
100-42-5	Styrene	8.8	U
75-25-2	Bromoform	8.8	U
98-82-8	Isopropylbenzene	8.8	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.8	U
108-86-1	Bromobenzene	8.8	U
79-34-5	1,1,2,2-Tetrachloroethane	8.8	U
96-18-4	1,2,3-Trichloropropane	8.8	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24190 20A

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718769

Sample wt/vol: 11.4 (g/mL) G Lab File ID: 718769E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.8	U
103-65-1	n-Propylbenzene	8.8	U
95-49-8	2-Chlorotoluene	8.8	U
106-43-4	4-Chlorotoluene	8.8	U
108-67-8	1,3,5-Trimethylbenzene	8.8	U
98-06-6	tert-Butylbenzene	8.8	U
95-63-6	1,2,4-Trimethylbenzene	8.8	U
135-98-8	sec-Butylbenzene	8.8	U
541-73-1	1,3-Dichlorobenzene	8.8	U
99-87-6	4-Isopropyltoluene	8.8	U
106-46-7	1,4-Dichlorobenzene	8.8	U
95-50-1	1,2-Dichlorobenzene	8.8	U
104-51-8	n-Butylbenzene	8.8	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.8	U
120-82-1	1,2,4-Trichlorobenzene	8.8	U
87-68-3	Hexachlorobutadiene	8.8	U
91-20-3	Naphthalene	8.8	U
87-61-6	1,2,3-Trichlorobenzene	8.8	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24201 31A

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718762

Sample wt/vol: 11.7 (g/mL) G Lab File ID: 718762E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.6	U
74-87-3	Chloromethane	9.4	B
75-01-4	Vinyl Chloride	8.6	U
74-83-9	Bromomethane	9.6	B
75-00-3	Chloroethane	8.6	U
75-69-4	Trichlorofluoromethane	8.6	U
107-02-8	Acrolein	43	U
75-35-4	1,1-Dichloroethene	8.6	U
76-13-1	Freon TF	8.6	U
67-64-1	Acetone	43	U
74-88-4	Methyl Iodide	5.4	JB
75-15-0	Carbon Disulfide	8.6	U
107-05-1	Allyl Chloride	8.6	U
75-09-2	Methylene Chloride	8.6	U
107-13-1	Acrylonitrile	8.6	U
156-60-5	trans-1,2-Dichloroethene	8.6	U
1634-04-4	Methyl-t-Butyl Ether	8.6	U
540-59-0	1,2-Dichloroethene (total)	8.6	U
75-34-3	1,1-Dichloroethane	8.6	U
108-05-4	Vinyl Acetate	8.6	U
126-99-8	Chloroprene	8.6	U
594-20-7	2,2-Dichloropropane	8.6	U
156-59-2	cis-1,2-Dichloroethene	8.6	U
78-93-3	2-Butanone	120	B
107-12-0	Propionitrile	34	U
74-97-5	Bromochloromethane	8.6	U
126-98-7	Methacrylonitrile	8.6	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	8.6	U
71-55-6	1,1,1-Trichloroethane	8.6	U
56-23-5	Carbon Tetrachloride	8.6	U
563-58-6	1,1-Dichloropropene	8.6	U
71-43-2	Benzene	8.6	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24201 31A

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718762

Sample wt/vol: 11.7 (g/mL) G Lab File ID: 718762E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	430	U
107-06-2	1,2-Dichloroethane	8.6	U
79-01-6	Trichloroethene	8.6	U
78-87-5	1,2-Dichloropropane	8.6	U
74-95-3	Dibromomethane	8.6	U
80-62-6	Methyl Methacrylate	8.6	U
123-91-1	1,4-Dioxane	430	U
75-27-4	Bromodichloromethane	8.6	U
110-75-8	2-Chloroethyl Vinyl Ether	8.6	U
10061-01-5	cis-1,3-Dichloropropene	8.6	U
108-10-1	4-Methyl-2-pentanone	43	U
108-88-3	Toluene	8.6	U
10061-02-6	trans-1,3-Dichloropropene	8.6	U
97-63-2	Ethyl Methacrylate	8.6	U
79-00-5	1,1,2-Trichloroethane	8.6	U
127-18-4	Tetrachloroethene	8.6	U
142-28-9	1,3-Dichloropropane	8.6	U
591-78-6	2-Hexanone	43	U
124-48-1	Dibromochloromethane	8.6	U
106-93-4	1,2-Dibromoethane	8.6	U
108-90-7	Chlorobenzene	8.6	U
630-20-6	1,1,1,2-Tetrachloroethane	8.6	U
100-41-4	Ethylbenzene	8.6	U
1330-20-7	Xylene (m,p)	8.6	U
95-47-6	Xylene (o)	8.6	U
1330-20-7	Xylene (total)	8.6	U
100-42-5	Styrene	8.6	U
75-25-2	Bromoform	8.6	U
98-82-8	Isopropylbenzene	8.6	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.6	U
108-86-1	Bromobenzene	8.6	U
79-34-5	1,1,2,2-Tetrachloroethane	8.6	U
96-18-4	1,2,3-Trichloropropane	8.6	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24201 31A

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718762

Sample wt/vol: 11.7 (g/mL) G Lab File ID: 718762E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.6	U
103-65-1	n-Propylbenzene	8.6	U
95-49-8	2-Chlorotoluene	8.6	U
106-43-4	4-Chlorotoluene	8.6	U
108-67-8	1,3,5-Trimethylbenzene	8.6	U
98-06-6	tert-Butylbenzene	8.6	U
95-63-6	1,2,4-Trimethylbenzene	8.6	U
135-98-8	sec-Butylbenzene	8.6	U
541-73-1	1,3-Dichlorobenzene	8.6	U
99-87-6	4-Isopropyltoluene	8.6	U
106-46-7	1,4-Dichlorobenzene	8.6	U
95-50-1	1,2-Dichlorobenzene	8.6	U
104-51-8	n-Butylbenzene	8.6	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.6	U
120-82-1	1,2,4-Trichlorobenzene	8.6	U
87-68-3	Hexachlorobutadiene	8.6	U
91-20-3	Naphthalene	8.6	U
87-61-6	1,2,3-Trichlorobenzene	8.6	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24232 10A

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718768

Sample wt/vol: 10.6 (g/mL) G Lab File ID: 718768E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	9.4	U
74-87-3	Chloromethane	4.2	JB
75-01-4	Vinyl Chloride	9.4	U
74-83-9	Bromomethane	3.8	JB
75-00-3	Chloroethane	9.4	U
75-69-4	Trichlorofluoromethane	9.4	U
107-02-8	Acrolein	47	U
75-35-4	1,1-Dichloroethene	9.4	U
76-13-1	Freon TF	9.4	U
67-64-1	Acetone	47	U
74-88-4	Methyl Iodide	4.3	JB
75-15-0	Carbon Disulfide	9.4	U
107-05-1	Allyl Chloride	9.4	U
75-09-2	Methylene Chloride	9.4	U
107-13-1	Acrylonitrile	9.4	U
156-60-5	trans-1,2-Dichloroethene	9.4	U
1634-04-4	Methyl-t-Butyl Ether	9.4	U
540-59-0	1,2-Dichloroethene (total)	9.4	U
75-34-3	1,1-Dichloroethane	9.4	U
108-05-4	Vinyl Acetate	9.4	U
126-99-8	Chloroprene	9.4	U
594-20-7	2,2-Dichloropropane	9.4	U
156-59-2	cis-1,2-Dichloroethene	9.4	U
78-93-3	2-Butanone	98	B
107-12-0	Propionitrile	38	U
74-97-5	Bromochloromethane	9.4	U
126-98-7	Methacrylonitrile	9.4	U
109-99-9	Tetrahydrofuran	130	U
67-66-3	Chloroform	9.4	U
71-55-6	1,1,1-Trichloroethane	9.4	U
56-23-5	Carbon Tetrachloride	9.4	U
563-58-6	1,1-Dichloropropene	9.4	U
71-43-2	Benzene	9.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24232 10A

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718768

Sample wt/vol: 10.6 (g/mL) G Lab File ID: 718768E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	470	U
107-06-2	1,2-Dichloroethane	9.4	U
79-01-6	Trichloroethene	9.4	U
78-87-5	1,2-Dichloropropane	9.4	U
74-95-3	Dibromomethane	9.4	U
80-62-6	Methyl Methacrylate	9.4	U
123-91-1	1,4-Dioxane	470	U
75-27-4	Bromodichloromethane	9.4	U
110-75-8	2-Chloroethyl Vinyl Ether	9.4	U
10061-01-5	cis-1,3-Dichloropropene	9.4	U
108-10-1	4-Methyl-2-pentanone	47	U
108-88-3	Toluene	9.4	U
10061-02-6	trans-1,3-Dichloropropene	9.4	U
97-63-2	Ethyl Methacrylate	9.4	U
79-00-5	1,1,2-Trichloroethane	9.4	U
127-18-4	Tetrachloroethene	9.4	U
142-28-9	1,3-Dichloropropane	9.4	U
591-78-6	2-Hexanone	47	U
124-48-1	Dibromochloromethane	9.4	U
106-93-4	1,2-Dibromoethane	9.4	U
108-90-7	Chlorobenzene	9.4	U
630-20-6	1,1,1,2-Tetrachloroethane	9.4	U
100-41-4	Ethylbenzene	9.4	U
1330-20-7	Xylene (m,p)	4.3	JB
95-47-6	Xylene (o)	9.4	U
1330-20-7	Xylene (total)	4.5	JB
100-42-5	Styrene	9.4	U
75-25-2	Bromoform	9.4	U
98-82-8	Isopropylbenzene	9.4	U
1476-11-5	cis-1,4-Dichloro-2-butene	9.4	U
108-86-1	Bromobenzene	9.4	U
79-34-5	1,1,2,2-Tetrachloroethane	9.4	U
96-18-4	1,2,3-Trichloropropane	9.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24232 10A

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718768

Sample wt/vol: 10.6 (g/mL) G Lab File ID: 718768E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	9.4	U
103-65-1	n-Propylbenzene	9.4	U
95-49-8	2-Chlorotoluene	9.4	U
106-43-4	4-Chlorotoluene	9.4	U
108-67-8	1,3,5-Trimethylbenzene	9.4	U
98-06-6	tert-Butylbenzene	9.4	U
95-63-6	1,2,4-Trimethylbenzene	9.4	U
135-98-8	sec-Butylbenzene	9.4	U
541-73-1	1,3-Dichlorobenzene	9.4	U
99-87-6	4-Isopropyltoluene	9.4	U
106-46-7	1,4-Dichlorobenzene	9.4	U
95-50-1	1,2-Dichlorobenzene	9.4	U
104-51-8	n-Butylbenzene	9.4	U
96-12-8	1,2-Dibromo-3-Chloropropane	9.4	U
120-82-1	1,2,4-Trichlorobenzene	9.4	U
87-68-3	Hexachlorobutadiene	9.4	U
91-20-3	Naphthalene	9.4	U
87-61-6	1,2,3-Trichlorobenzene	9.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24234 7A

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718760

Sample wt/vol: 12.4 (g/mL) G Lab File ID: 718760E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.0	U
74-87-3	Chloromethane	6.0	JB
75-01-4	Vinyl Chloride	8.0	U
74-83-9	Bromomethane	8.4	B
75-00-3	Chloroethane	8.0	U
75-69-4	Trichlorofluoromethane	8.0	U
107-02-8	Acrolein	40	U
75-35-4	1,1-Dichloroethene	8.0	U
76-13-1	Freon TF	8.0	U
67-64-1	Acetone	40	U
74-88-4	Methyl Iodide	5.2	JB
75-15-0	Carbon Disulfide	8.0	U
107-05-1	Allyl Chloride	8.0	U
75-09-2	Methylene Chloride	8.0	U
107-13-1	Acrylonitrile	8.0	U
156-60-5	trans-1,2-Dichloroethene	8.0	U
1634-04-4	Methyl-t-Butyl Ether	8.0	U
540-59-0	1,2-Dichloroethene (total)	8.0	U
75-34-3	1,1-Dichloroethane	8.0	U
108-05-4	Vinyl Acetate	8.0	U
126-99-8	Chloroprene	8.0	U
594-20-7	2,2-Dichloropropane	8.0	U
156-59-2	cis-1,2-Dichloroethene	8.0	U
78-93-3	2-Butanone	100	B
107-12-0	Propionitrile	32	U
74-97-5	Bromochloromethane	8.0	U
126-98-7	Methacrylonitrile	8.0	U
109-99-9	Tetrahydrofuran	110	U
67-66-3	Chloroform	8.0	U
71-55-6	1,1,1-Trichloroethane	25	B
56-23-5	Carbon Tetrachloride	8.0	U
563-58-6	1,1-Dichloropropene	8.0	U
71-43-2	Benzene	8.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24234 7A

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718760

Sample wt/vol: 12.4 (g/mL) G Lab File ID: 718760E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	400	U
107-06-2	1,2-Dichloroethane	8.0	U
79-01-6	Trichloroethene	8.0	U
78-87-5	1,2-Dichloropropane	8.0	U
74-95-3	Dibromomethane	8.0	U
80-62-6	Methyl Methacrylate	8.0	U
123-91-1	1,4-Dioxane	400	U
75-27-4	Bromodichloromethane	8.0	U
110-75-8	2-Chloroethyl Vinyl Ether	8.0	U
10061-01-5	cis-1,3-Dichloropropene	8.0	U
108-10-1	4-Methyl-2-pentanone	40	U
108-88-3	Toluene	8.0	U
10061-02-6	trans-1,3-Dichloropropene	8.0	U
97-63-2	Ethyl Methacrylate	8.0	U
79-00-5	1,1,2-Trichloroethane	8.0	U
127-18-4	Tetrachloroethene	8.0	U
142-28-9	1,3-Dichloropropane	8.0	U
591-78-6	2-Hexanone	40	U
124-48-1	Dibromochloromethane	8.0	U
106-93-4	1,2-Dibromoethane	8.0	U
108-90-7	Chlorobenzene	8.0	U
630-20-6	1,1,1,2-Tetrachloroethane	8.0	U
100-41-4	Ethylbenzene	8.0	U
1330-20-7	Xylene (m,p)	3.4	JB
95-47-6	Xylene (o)	8.0	U
1330-20-7	Xylene (total)	3.6	JB
100-42-5	Styrene	8.0	U
75-25-2	Bromoform	8.0	U
98-82-8	Isopropylbenzene	8.0	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.0	U
108-86-1	Bromobenzene	8.0	U
79-34-5	1,1,2,2-Tetrachloroethane	8.0	U
96-18-4	1,2,3-Trichloropropane	8.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

24234 7A

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718760

Sample wt/vol: 12.4 (g/mL) G Lab File ID: 718760E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.0	U
103-65-1	n-Propylbenzene	8.0	U
95-49-8	2-Chlorotoluene	8.0	U
106-43-4	4-Chlorotoluene	8.0	U
108-67-8	1,3,5-Trimethylbenzene	8.0	U
98-06-6	tert-Butylbenzene	8.0	U
95-63-6	1,2,4-Trimethylbenzene	8.0	U
135-98-8	sec-Butylbenzene	8.0	U
541-73-1	1,3-Dichlorobenzene	8.0	U
99-87-6	4-Isopropyltoluene	8.0	U
106-46-7	1,4-Dichlorobenzene	8.0	U
95-50-1	1,2-Dichlorobenzene	8.0	U
104-51-8	n-Butylbenzene	8.0	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.0	U
120-82-1	1,2,4-Trichlorobenzene	8.0	U
87-68-3	Hexachlorobutadiene	8.0	U
91-20-3	Naphthalene	8.0	U
87-61-6	1,2,3-Trichlorobenzene	8.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

MEOHBLK -072407

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

CBD- 8/19/07

Matrix: (soil/water) SOIL Lab Sample ID: 718770

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 718770E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	5.7	J
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
107-02-8	Acrolein	50	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	Freon TF	10	U
67-64-1	Acetone	50	U
74-88-4	Methyl Iodide	14	
75-15-0	Carbon Disulfide	10	U
107-05-1	Allyl Chloride	10	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl-t-Butyl Ether	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-3	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
126-99-8	Chloroprene	10	U
594-20-7	2,2-Dichloropropane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	170	
107-12-0	Propionitrile	40	U
74-97-5	Bromochloromethane	10	U
126-98-7	Methacrylonitrile	10	U
109-99-9	Tetrahydrofuran	140	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	33	
56-23-5	Carbon Tetrachloride	10	U
563-58-6	1,1-Dichloropropene	10	U
71-43-2	Benzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

MEOHBLK

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718770

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 718770E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	500	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
74-95-3	Dibromomethane	10	U
80-62-6	Methyl Methacrylate	10	U
123-91-1	1,4-Dioxane	500	U
75-27-4	Bromodichloromethane	10	U
110-75-8	2-Chloroethyl Vinyl Ether	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
97-63-2	Ethyl Methacrylate	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
142-28-9	1,3-Dichloropropane	10	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
630-20-6	1,1,1,2-Tetrachloroethane	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (m,p)	6.4	J
95-47-6	Xylene (o)	10	U
1330-20-7	Xylene (total)	6.8	J
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
1476-11-5	cis-1,4-Dichloro-2-butene	10	U
108-86-1	Bromobenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
96-18-4	1,2,3-Trichloropropane	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

MEOHBLK

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLV Case No.: POWHAT SAS No.: SDG No.: 121065

Matrix: (soil/water) SOIL Lab Sample ID: 718770

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 718770E

Level: (low/med) MED Date Received: 07/26/07

% Moisture: not dec. _____ Date Analyzed: 08/03/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	5.6	J
103-65-1	n-Propylbenzene	10	U
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
108-67-8	1,3,5-Trimethylbenzene	10	U
98-06-6	tert-Butylbenzene	10	U
95-63-6	1,2,4-Trimethylbenzene	10	U
135-98-8	sec-Butylbenzene	10	U
541-73-1	1,3-Dichlorobenzene	5.4	J
99-87-6	4-Isopropyltoluene	10	U
106-46-7	1,4-Dichlorobenzene	7.3	J
95-50-1	1,2-Dichlorobenzene	7.1	J
104-51-8	n-Butylbenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	12	
120-82-1	1,2,4-Trichlorobenzene	16	
87-68-3	Hexachlorobutadiene	4.7	J
91-20-3	Naphthalene	6.2	J
87-61-6	1,2,3-Trichlorobenzene	11	

August 24, 2007

STL

STL Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403

Tel: 802 660 1990 Fax: 802 660 1919
www.stl-inc.com

Mr. Clyde Dennis
Argonne National Laboratory
9700 S. Cass Avenue
Building 203, Office 149
Argonne, IL 60439

Re: Laboratory Project No. 21005
Case: POWHAT; SDG: 121337

Dear Mr. Dennis:

Enclosed are analytical results for samples that were received by STL Burlington on August 10th, 2007. Laboratory identification numbers were assigned, and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 08/10/07 ETR No: 121337		
720419	PH-S-24266 (10A)	08/08/07	LIQUID
720420	PH-S-24167 (10A)	08/08/07	LIQUID
720421	PH-S-24320 (20A)	08/08/07	LIQUID
720422	PH-S-24326 (10A)	08/08/07	LIQUID
720423	PH-S-24343 (30A)	08/08/07	LIQUID
720424	PH-S-24313 (10A)	08/08/07	LIQUID
720425	PH-S-24665 (10A)	08/08/07	LIQUID
720426	PH-S-MEOH BLANK	08/08/07	LIQUID

Documentation of the condition of the samples at the time of their receipt and any exception to the laboratory's Sample Acceptance Policy is documented in the Sample Handling section of this submittal. In order to accommodate field length limitations in processing the data summary forms, the laboratory did, in certain instances, abbreviate the sample identifier. The electronically formatted data provides for the full sample identifier.

The samples were analyzed by Method 8260B, using a low-level calibration. In performing the analytical work, 500 microliters of the methanol extract were added to the 5 milliliter purge volume. Each of the analyses associated with the sample set did exhibit an acceptable internal standard performance, and there was an acceptable recovery of the surrogate controls in each analysis. Two types of laboratory control sample analyses were performed in the course of performing the analytical work. One was performed to evaluate method performance, and one was performed with 500 microliters of methanol added to the purge volume in order to characterize the affect on the analytical process. With the exception of that for 2-chloroethyl vinyl ether, there was an acceptable recovery of each target analyte in the laboratory control sample analysis that defined method performance. The recovery of 2-chloroethyl vinyl ether in that analysis was 53 percent. In the laboratory control sample analysis with methanol, several of the earlier eluting compounds did exhibit a lower recovery performance, as did isobutyl alcohol,

4-methyl-2-pentanone, 2-hexanone, cis-1,4-dichloro-2-butene, and trans-1,4-dichloro-2-butene. Most profoundly affected was the performance of acrolein (17 percent), methyl iodide (16 percent), and carbon disulfide (18 percent). Chloroform and carbon tetrachloride were recovered well in each of the laboratory control sample analyses. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. Relatively high concentrations of acetone, 2-butanone, and 1,1,1-trichloroethane were identified in the analysis PH-S-MEOHBLANK, as were trace concentrations of chloroform, naphthalene, and 1,2,3-trichlorobenzene. The laboratory did associate the analysis of PH-S-MEOHBLANK with the analysis of each of the field samples in order to reference the blank association, and accordingly qualify the reported results. Trace concentrations of 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, and 1,2,3-trichlorobenzene were identified in the analysis of the instrument blank that was analyzed in association with the samples.

The analytical results associated with the samples presented in this test report were generated under a quality system that adheres to requirements specified in the NELAC standard. Release of the data in this test report and any associated electronic deliverables is authorized by the Laboratory Director's designee as verified by the following signature.

If there are any questions regarding this submittal, please contact me at 802 660-1990.

Sincerely,

Kirk F. Young
Project Manager

Enclosure
KFY/hsf

STL Burlington Data Qualifier Definitions

Organic

U: Compound analyzed but not detected at a concentration above the reporting limit.

J: Estimated value.

N: Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds (TICs) where the identification of a compound is based on a mass spectral library search.

P: SW-846: Greater than 40% difference for detected concentrations between two GC columns. Unless otherwise specified the higher of the two values is reported on the Form I.

CLP SOW: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified the lower of the two values is reported on the Form I.

C: Pesticide result whose identification has been confirmed by GC/MS.

B: Analyte is found in the sample and the associated method blank. The flag is used for tentatively identified compounds as well as positively identified compounds.

E: Compounds whose concentrations exceed the upper limit of the calibration range of the instrument for that specific analysis.

D: Concentrations identified from analysis of the sample at a secondary dilution.

A: Tentatively identified compound is a suspected aldol condensation product.

X,Y,Z: Laboratory defined flags that may be used alone or combined, as needed. If used, the description of the flag is defined in the project narrative.

Inorganic/Metals

E: Reported value is estimated due to the presence of interference.

N: Matrix spike sample recovery is not within control limits.

* Duplicate sample analysis is not within control limits.

B: The result reported is less than the reporting limit but greater than the instrument detection limit.

U: Analyte was analyzed for but not detected above the reporting limit.

Method Codes:

P	ICP-AES
MS	ICP-MS
CV	Cold Vapor AA
AS	Semi-Automated Spectrophotometric

3439

MATRIX: Soil - Methanol
RECEIVING LAB: TransAmerica - STL
PROJECT/SITE: Pondhattan
SAMPLER(S) (Signature): L. Larsen / [illegible]

ARGONNE NATIONAL LABORATORY
CHAIN OF CUSTODY RECORD*

Shipping Container No.
Shipping Info:
ANL Field Contact (Name & Temporary Phone):

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOCs	REMARKS: Mass of Soil (g)
8/8/07 419	PH-S-24266 (10A)	1-20mL	✓	12.661
420	PH-S-24167 (10A)		✓	10.503
421	PH-S-24320 (20A)		✓	12.295
422	PH-S-24326 (10A)		✓	11.939
423	PH-S-24343 (30A)		✓	11.718
424	PH-S-24313 (10A)		✓	10.711
425	PH-S-24665 (10A		✓	11.055
426	PH-S-MeOH Blank		✓	—

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
[signature]	8/9/07	9:50					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
[signature]	8/9/07	9:33AM	[signature]	8/10/07 JEG	0915	

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

ER-160 (4-01)

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24167

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720420

Sample wt/vol: 10.5 (g/mL) G Lab File ID: 720420

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	9.5	U
74-87-3	Chloromethane	9.5	U
75-01-4	Vinyl Chloride	9.5	U
74-83-9	Bromomethane	9.5	U
75-00-3	Chloroethane	9.5	U
75-69-4	Trichlorofluoromethane	9.5	U
107-02-8	Acrolein	48	U
75-35-4	1,1-Dichloroethene	9.5	U
76-13-1	Freon TF	9.5	U
67-64-1	Acetone	31	JB
74-88-4	Methyl Iodide	9.5	U
75-15-0	Carbon Disulfide	9.5	U
107-05-1	Allyl Chloride	9.5	U
75-09-2	Methylene Chloride	9.5	U
107-13-1	Acrylonitrile	9.5	U
156-60-5	trans-1,2-Dichloroethene	9.5	U
1634-04-4	Methyl-t-Butyl Ether	9.5	U
540-59-0	1,2-Dichloroethene (total)	9.5	U
75-34-3	1,1-Dichloroethane	9.5	U
108-05-4	Vinyl Acetate	9.5	U
126-99-8	Chloroprene	9.5	U
594-20-7	2,2-Dichloropropane	9.5	U
156-59-2	cis-1,2-Dichloroethene	9.5	U
78-93-3	2-Butanone	110	B
107-12-0	Propionitrile	38	U
74-97-5	Bromochloromethane	9.5	U
126-98-7	Methacrylonitrile	9.5	U
109-99-9	Tetrahydrofuran	130	U
67-66-3	Chloroform	8.8	JB
71-55-6	1,1,1-Trichloroethane	30	B
56-23-5	Carbon Tetrachloride	89	
563-58-6	1,1-Dichloropropene	9.5	U
71-43-2	Benzene	9.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24167

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720420

Sample wt/vol: 10.5 (g/mL) G Lab File ID: 720420

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	480	U
107-06-2	1,2-Dichloroethane	9.5	U
79-01-6	Trichloroethene	9.5	U
78-87-5	1,2-Dichloropropane	9.5	U
74-95-3	Dibromomethane	9.5	U
80-62-6	Methyl Methacrylate	9.5	U
123-91-1	1,4-Dioxane	480	U
75-27-4	Bromodichloromethane	9.5	U
110-75-8	2-Chloroethyl Vinyl Ether	9.5	U
10061-01-5	cis-1,3-Dichloropropene	9.5	U
108-10-1	4-Methyl-2-pentanone	48	U
108-88-3	Toluene	2.4	J
10061-02-6	trans-1,3-Dichloropropene	9.5	U
97-63-2	Ethyl Methacrylate	9.5	U
79-00-5	1,1,2-Trichloroethane	9.5	U
127-18-4	Tetrachloroethene	9.5	U
142-28-9	1,3-Dichloropropane	9.5	U
591-78-6	2-Hexanone	48	U
124-48-1	Dibromochloromethane	9.5	U
106-93-4	1,2-Dibromoethane	9.5	U
108-90-7	Chlorobenzene	9.5	U
630-20-6	1,1,1,2-Tetrachloroethane	9.5	U
100-41-4	Ethylbenzene	9.5	U
1330-20-7	Xylene (m,p)	3.5	J
95-47-6	Xylene (o)	9.5	U
1330-20-7	Xylene (total)	3.6	J
100-42-5	Styrene	9.5	U
75-25-2	Bromoform	9.5	U
98-82-8	Isopropylbenzene	9.5	U
1476-11-5	cis-1,4-Dichloro-2-butene	9.5	U
108-86-1	Bromobenzene	9.5	U
79-34-5	1,1,2,2-Tetrachloroethane	9.5	U
96-18-4	1,2,3-Trichloropropane	9.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24167

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720420

Sample wt/vol: 10.5 (g/mL) G Lab File ID: 720420

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	9.5	U
103-65-1	n-Propylbenzene	9.5	U
95-49-8	2-Chlorotoluene	9.5	U
106-43-4	4-Chlorotoluene	9.5	U
108-67-8	1,3,5-Trimethylbenzene	9.5	U
98-06-6	tert-Butylbenzene	9.5	U
95-63-6	1,2,4-Trimethylbenzene	9.5	U
135-98-8	sec-Butylbenzene	9.5	U
541-73-1	1,3-Dichlorobenzene	9.5	U
99-87-6	4-Isopropyltoluene	9.5	U
106-46-7	1,4-Dichlorobenzene	9.5	U
95-50-1	1,2-Dichlorobenzene	9.5	U
104-51-8	n-Butylbenzene	9.5	U
96-12-8	1,2-Dibromo-3-Chloropropane	9.5	U
120-82-1	1,2,4-Trichlorobenzene	9.5	U
87-68-3	Hexachlorobutadiene	9.5	U
91-20-3	Naphthalene	9.5	U
87-61-6	1,2,3-Trichlorobenzene	9.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24266

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720419

Sample wt/vol: 12.7 (g/mL) G Lab File ID: 720419

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	7.9	U
74-87-3	Chloromethane	7.9	U
75-01-4	Vinyl Chloride	7.9	U
74-83-9	Bromomethane	7.9	U
75-00-3	Chloroethane	7.9	U
75-69-4	Trichlorofluoromethane	7.9	U
107-02-8	Acrolein	39	U
75-35-4	1,1-Dichloroethene	7.9	U
76-13-1	Freon TF	7.9	U
67-64-1	Acetone	21	JB
74-88-4	Methyl Iodide	7.9	U
75-15-0	Carbon Disulfide	7.9	U
107-05-1	Allyl Chloride	7.9	U
75-09-2	Methylene Chloride	7.9	U
107-13-1	Acrylonitrile	7.9	U
156-60-5	trans-1,2-Dichloroethene	7.9	U
1634-04-4	Methyl-t-Butyl Ether	7.9	U
540-59-0	1,2-Dichloroethene (total)	7.9	U
75-34-3	1,1-Dichloroethane	7.9	U
108-05-4	Vinyl Acetate	7.9	U
126-99-8	Chloroprene	7.9	U
594-20-7	2,2-Dichloropropane	7.9	U
156-59-2	cis-1,2-Dichloroethene	7.9	U
78-93-3	2-Butanone	82	B
107-12-0	Propionitrile	32	U
74-97-5	Bromochloromethane	7.9	U
126-98-7	Methacrylonitrile	7.9	U
109-99-9	Tetrahydrofuran	110	U
67-66-3	Chloroform	4.4	JB
71-55-6	1,1,1-Trichloroethane	27	B
56-23-5	Carbon Tetrachloride	12	
563-58-6	1,1-Dichloropropene	7.9	U
71-43-2	Benzene	7.9	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24266

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720419

Sample wt/vol: 12.7 (g/mL) G Lab File ID: 720419

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	390	U
107-06-2	1,2-Dichloroethane	7.9	U
79-01-6	Trichloroethene	7.9	U
78-87-5	1,2-Dichloropropane	7.9	U
74-95-3	Dibromomethane	7.9	U
80-62-6	Methyl Methacrylate	7.9	U
123-91-1	1,4-Dioxane	390	U
75-27-4	Bromodichloromethane	7.9	U
110-75-8	2-Chloroethyl Vinyl Ether	7.9	U
10061-01-5	cis-1,3-Dichloropropene	7.9	U
108-10-1	4-Methyl-2-pentanone	39	U
108-88-3	Toluene	2.2	J
10061-02-6	trans-1,3-Dichloropropene	7.9	U
97-63-2	Ethyl Methacrylate	7.9	U
79-00-5	1,1,2-Trichloroethane	7.9	U
127-18-4	Tetrachloroethene	7.9	U
142-28-9	1,3-Dichloropropane	7.9	U
591-78-6	2-Hexanone	39	U
124-48-1	Dibromochloromethane	7.9	U
106-93-4	1,2-Dibromoethane	7.9	U
108-90-7	Chlorobenzene	7.9	U
630-20-6	1,1,1,2-Tetrachloroethane	7.9	U
100-41-4	Ethylbenzene	7.9	U
1330-20-7	Xylene (m,p)	3.6	J
95-47-6	Xylene (o)	7.9	U
1330-20-7	Xylene (total)	3.8	J
100-42-5	Styrene	7.9	U
75-25-2	Bromoform	7.9	U
98-82-8	Isopropylbenzene	7.9	U
1476-11-5	cis-1,4-Dichloro-2-butene	7.9	U
108-86-1	Bromobenzene	7.9	U
79-34-5	1,1,2,2-Tetrachloroethane	7.9	U
96-18-4	1,2,3-Trichloropropane	7.9	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24266

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720419

Sample wt/vol: 12.7 (g/mL) G Lab File ID: 720419

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	7.9	U
103-65-1	n-Propylbenzene	7.9	U
95-49-8	2-Chlorotoluene	7.9	U
106-43-4	4-Chlorotoluene	7.9	U
108-67-8	1,3,5-Trimethylbenzene	7.9	U
98-06-6	tert-Butylbenzene	7.9	U
95-63-6	1,2,4-Trimethylbenzene	7.9	U
135-98-8	sec-Butylbenzene	7.9	U
541-73-1	1,3-Dichlorobenzene	7.9	U
99-87-6	4-Isopropyltoluene	7.9	U
106-46-7	1,4-Dichlorobenzene	7.9	U
95-50-1	1,2-Dichlorobenzene	7.9	U
104-51-8	n-Butylbenzene	7.9	U
96-12-8	1,2-Dibromo-3-Chloropropane	7.9	U
120-82-1	1,2,4-Trichlorobenzene	7.9	U
87-68-3	Hexachlorobutadiene	7.9	U
91-20-3	Naphthalene	7.9	U
87-61-6	1,2,3-Trichlorobenzene	7.9	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24313

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720424

Sample wt/vol: 10.7 (g/mL) G Lab File ID: 720424

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	9.3	U
74-87-3	Chloromethane	9.3	U
75-01-4	Vinyl Chloride	9.3	U
74-83-9	Bromomethane	9.3	U
75-00-3	Chloroethane	9.3	U
75-69-4	Trichlorofluoromethane	9.3	U
107-02-8	Acrolein	47	U
75-35-4	1,1-Dichloroethene	9.3	U
76-13-1	Freon TF	9.3	U
67-64-1	Acetone	20	JB
74-88-4	Methyl Iodide	9.3	U
75-15-0	Carbon Disulfide	9.3	U
107-05-1	Allyl Chloride	9.3	U
75-09-2	Methylene Chloride	9.3	U
107-13-1	Acrylonitrile	9.3	U
156-60-5	trans-1,2-Dichloroethene	9.3	U
1634-04-4	Methyl-t-Butyl Ether	9.3	U
540-59-0	1,2-Dichloroethene (total)	9.3	U
75-34-3	1,1-Dichloroethane	9.3	U
108-05-4	Vinyl Acetate	9.3	U
126-99-8	Chloroprene	9.3	U
594-20-7	2,2-Dichloropropane	9.3	U
156-59-2	cis-1,2-Dichloroethene	9.3	U
78-93-3	2-Butanone	44	JB
107-12-0	Propionitrile	37	U
74-97-5	Bromochloromethane	9.3	U
126-98-7	Methacrylonitrile	9.3	U
109-99-9	Tetrahydrofuran	130	U
67-66-3	Chloroform	7.8	JB
71-55-6	1,1,1-Trichloroethane	110	B
56-23-5	Carbon Tetrachloride	9.3	U
563-58-6	1,1-Dichloropropene	9.3	U
71-43-2	Benzene	9.3	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24313

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720424

Sample wt/vol: 10.7 (g/mL) G Lab File ID: 720424

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	470	U
107-06-2	1,2-Dichloroethane	9.3	U
79-01-6	Trichloroethene	9.3	U
78-87-5	1,2-Dichloropropane	9.3	U
74-95-3	Dibromomethane	9.3	U
80-62-6	Methyl Methacrylate	9.3	U
123-91-1	1,4-Dioxane	470	U
75-27-4	Bromodichloromethane	9.3	U
110-75-8	2-Chloroethyl Vinyl Ether	9.3	U
10061-01-5	cis-1,3-Dichloropropene	9.3	U
108-10-1	4-Methyl-2-pentanone	47	U
108-88-3	Toluene	9.3	U
10061-02-6	trans-1,3-Dichloropropene	9.3	U
97-63-2	Ethyl Methacrylate	9.3	U
79-00-5	1,1,2-Trichloroethane	9.3	U
127-18-4	Tetrachloroethene	9.3	U
142-28-9	1,3-Dichloropropane	9.3	U
591-78-6	2-Hexanone	47	U
124-48-1	Dibromochloromethane	9.3	U
106-93-4	1,2-Dibromoethane	9.3	U
108-90-7	Chlorobenzene	9.3	U
630-20-6	1,1,1,2-Tetrachloroethane	9.3	U
100-41-4	Ethylbenzene	9.3	U
1330-20-7	Xylene (m,p)	9.3	U
95-47-6	Xylene (o)	9.3	U
1330-20-7	Xylene (total)	9.3	U
100-42-5	Styrene	9.3	U
75-25-2	Bromoform	9.3	U
98-82-8	Isopropylbenzene	9.3	U
1476-11-5	cis-1,4-Dichloro-2-butene	9.3	U
108-86-1	Bromobenzene	9.3	U
79-34-5	1,1,2,2-Tetrachloroethane	9.3	U
96-18-4	1,2,3-Trichloropropane	9.3	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24313

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720424

Sample wt/vol: 10.7 (g/mL) G Lab File ID: 720424

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	9.3	U
103-65-1	n-Propylbenzene	9.3	U
95-49-8	2-Chlorotoluene	9.3	U
106-43-4	4-Chlorotoluene	9.3	U
108-67-8	1,3,5-Trimethylbenzene	9.3	U
98-06-6	tert-Butylbenzene	9.3	U
95-63-6	1,2,4-Trimethylbenzene	9.3	U
135-98-8	sec-Butylbenzene	9.3	U
541-73-1	1,3-Dichlorobenzene	9.3	U
99-87-6	4-Isopropyltoluene	9.3	U
106-46-7	1,4-Dichlorobenzene	9.3	U
95-50-1	1,2-Dichlorobenzene	9.3	U
104-51-8	n-Butylbenzene	9.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	9.3	U
120-82-1	1,2,4-Trichlorobenzene	9.3	U
87-68-3	Hexachlorobutadiene	9.3	U
91-20-3	Naphthalene	9.3	U
87-61-6	1,2,3-Trichlorobenzene	9.3	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24320

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720421

Sample wt/vol: 12.3 (g/mL) G Lab File ID: 720421

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.1	U
74-87-3	Chloromethane	8.1	U
75-01-4	Vinyl Chloride	8.1	U
74-83-9	Bromomethane	8.1	U
75-00-3	Chloroethane	8.1	U
75-69-4	Trichlorofluoromethane	8.1	U
107-02-8	Acrolein	41	U
75-35-4	1,1-Dichloroethene	8.1	U
76-13-1	Freon TF	8.1	U
67-64-1	Acetone	25	JB
74-88-4	Methyl Iodide	8.1	U
75-15-0	Carbon Disulfide	8.1	U
107-05-1	Allyl Chloride	8.1	U
75-09-2	Methylene Chloride	8.1	U
107-13-1	Acrylonitrile	8.1	U
156-60-5	trans-1,2-Dichloroethene	8.1	U
1634-04-4	Methyl-t-Butyl Ether	8.1	U
540-59-0	1,2-Dichloroethene (total)	8.1	U
75-34-3	1,1-Dichloroethane	8.1	U
108-05-4	Vinyl Acetate	8.1	U
126-99-8	Chloroprene	8.1	U
594-20-7	2,2-Dichloropropane	8.1	U
156-59-2	cis-1,2-Dichloroethene	8.1	U
78-93-3	2-Butanone	46	B
107-12-0	Propionitrile	33	U
74-97-5	Bromochloromethane	8.1	U
126-98-7	Methacrylonitrile	8.1	U
109-99-9	Tetrahydrofuran	110	U
67-66-3	Chloroform	5.5	JB
71-55-6	1,1,1-Trichloroethane	87	B
56-23-5	Carbon Tetrachloride	8.1	U
563-58-6	1,1-Dichloropropene	8.1	U
71-43-2	Benzene	8.1	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24320

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720421

Sample wt/vol: 12.3 (g/mL) G Lab File ID: 720421

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	410	U
107-06-2	1,2-Dichloroethane	8.1	U
79-01-6	Trichloroethene	8.1	U
78-87-5	1,2-Dichloropropane	8.1	U
74-95-3	Dibromomethane	8.1	U
80-62-6	Methyl Methacrylate	8.1	U
123-91-1	1,4-Dioxane	410	U
75-27-4	Bromodichloromethane	8.1	U
110-75-8	2-Chloroethyl Vinyl Ether	8.1	U
10061-01-5	cis-1,3-Dichloropropene	8.1	U
108-10-1	4-Methyl-2-pentanone	41	U
108-88-3	Toluene	8.1	U
10061-02-6	trans-1,3-Dichloropropene	8.1	U
97-63-2	Ethyl Methacrylate	8.1	U
79-00-5	1,1,2-Trichloroethane	8.1	U
127-18-4	Tetrachloroethene	8.1	U
142-28-9	1,3-Dichloropropane	8.1	U
591-78-6	2-Hexanone	41	U
124-48-1	Dibromochloromethane	8.1	U
106-93-4	1,2-Dibromoethane	8.1	U
108-90-7	Chlorobenzene	8.1	U
630-20-6	1,1,1,2-Tetrachloroethane	8.1	U
100-41-4	Ethylbenzene	8.1	U
1330-20-7	Xylene (m,p)	8.1	U
95-47-6	Xylene (o)	8.1	U
1330-20-7	Xylene (total)	8.1	U
100-42-5	Styrene	8.1	U
75-25-2	Bromoform	8.1	U
98-82-8	Isopropylbenzene	8.1	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.1	U
108-86-1	Bromobenzene	8.1	U
79-34-5	1,1,2,2-Tetrachloroethane	8.1	U
96-18-4	1,2,3-Trichloropropane	8.1	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24320

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720421

Sample wt/vol: 12.3 (g/mL) G Lab File ID: 720421

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.1	U
103-65-1	n-Propylbenzene	8.1	U
95-49-8	2-Chlorotoluene	8.1	U
106-43-4	4-Chlorotoluene	8.1	U
108-67-8	1,3,5-Trimethylbenzene	8.1	U
98-06-6	tert-Butylbenzene	8.1	U
95-63-6	1,2,4-Trimethylbenzene	8.1	U
135-98-8	sec-Butylbenzene	8.1	U
541-73-1	1,3-Dichlorobenzene	8.1	U
99-87-6	4-Isopropyltoluene	8.1	U
106-46-7	1,4-Dichlorobenzene	8.1	U
95-50-1	1,2-Dichlorobenzene	8.1	U
104-51-8	n-Butylbenzene	8.1	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.1	U
120-82-1	1,2,4-Trichlorobenzene	8.1	U
87-68-3	Hexachlorobutadiene	8.1	U
91-20-3	Naphthalene	8.1	U
87-61-6	1,2,3-Trichlorobenzene	8.1	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24326

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720422

Sample wt/vol: 11.9 (g/mL) G Lab File ID: 720422

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.4	U
74-87-3	Chloromethane	8.4	U
75-01-4	Vinyl Chloride	8.4	U
74-83-9	Bromomethane	8.4	U
75-00-3	Chloroethane	8.4	U
75-69-4	Trichlorofluoromethane	8.4	U
107-02-8	Acrolein	42	U
75-35-4	1,1-Dichloroethene	8.4	U
76-13-1	Freon TF	8.4	U
67-64-1	Acetone	23	JB
74-88-4	Methyl Iodide	8.4	U
75-15-0	Carbon Disulfide	8.4	U
107-05-1	Allyl Chloride	8.4	U
75-09-2	Methylene Chloride	8.4	U
107-13-1	Acrylonitrile	8.4	U
156-60-5	trans-1,2-Dichloroethene	8.4	U
1634-04-4	Methyl-t-Butyl Ether	8.4	U
540-59-0	1,2-Dichloroethene (total)	8.4	U
75-34-3	1,1-Dichloroethane	8.4	U
108-05-4	Vinyl Acetate	8.4	U
126-99-8	Chloroprene	8.4	U
594-20-7	2,2-Dichloropropane	8.4	U
156-59-2	cis-1,2-Dichloroethene	8.4	U
78-93-3	2-Butanone	55	B
107-12-0	Propionitrile	34	U
74-97-5	Bromochloromethane	8.4	U
126-98-7	Methacrylonitrile	8.4	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	5.8	JB
71-55-6	1,1,1-Trichloroethane	90	B
56-23-5	Carbon Tetrachloride	8.4	U
563-58-6	1,1-Dichloropropene	8.4	U
71-43-2	Benzene	8.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24326

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720422

Sample wt/vol: 11.9 (g/mL) G Lab File ID: 720422

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	420	U
107-06-2	1,2-Dichloroethane	8.4	U
79-01-6	Trichloroethene	8.4	U
78-87-5	1,2-Dichloropropane	8.4	U
74-95-3	Dibromomethane	8.4	U
80-62-6	Methyl Methacrylate	8.4	U
123-91-1	1,4-Dioxane	420	U
75-27-4	Bromodichloromethane	8.4	U
110-75-8	2-Chloroethyl Vinyl Ether	8.4	U
10061-01-5	cis-1,3-Dichloropropene	8.4	U
108-10-1	4-Methyl-2-pentanone	42	U
108-88-3	Toluene	8.4	U
10061-02-6	trans-1,3-Dichloropropene	8.4	U
97-63-2	Ethyl Methacrylate	8.4	U
79-00-5	1,1,2-Trichloroethane	8.4	U
127-18-4	Tetrachloroethene	8.4	U
142-28-9	1,3-Dichloropropane	8.4	U
591-78-6	2-Hexanone	42	U
124-48-1	Dibromochloromethane	8.4	U
106-93-4	1,2-Dibromoethane	8.4	U
108-90-7	Chlorobenzene	8.4	U
630-20-6	1,1,1,2-Tetrachloroethane	8.4	U
100-41-4	Ethylbenzene	8.4	U
1330-20-7	Xylene (m,p)	1.9	J
95-47-6	Xylene (o)	8.4	U
1330-20-7	Xylene (total)	2.0	J
100-42-5	Styrene	8.4	U
75-25-2	Bromoform	8.4	U
98-82-8	Isopropylbenzene	8.4	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.4	U
108-86-1	Bromobenzene	8.4	U
79-34-5	1,1,2,2-Tetrachloroethane	8.4	U
96-18-4	1,2,3-Trichloropropane	8.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24326

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720422

Sample wt/vol: 11.9 (g/mL) G Lab File ID: 720422

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.4	U
103-65-1	n-Propylbenzene	8.4	U
95-49-8	2-Chlorotoluene	8.4	U
106-43-4	4-Chlorotoluene	8.4	U
108-67-8	1,3,5-Trimethylbenzene	8.4	U
98-06-6	tert-Butylbenzene	8.4	U
95-63-6	1,2,4-Trimethylbenzene	8.4	U
135-98-8	sec-Butylbenzene	8.4	U
541-73-1	1,3-Dichlorobenzene	8.4	U
99-87-6	4-Isopropyltoluene	8.4	U
106-46-7	1,4-Dichlorobenzene	8.4	U
95-50-1	1,2-Dichlorobenzene	8.4	U
104-51-8	n-Butylbenzene	8.4	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.4	U
120-82-1	1,2,4-Trichlorobenzene	8.4	U
87-68-3	Hexachlorobutadiene	8.4	U
91-20-3	Naphthalene	8.2	JB
87-61-6	1,2,3-Trichlorobenzene	8.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24343

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720423

Sample wt/vol: 11.7 (g/mL) G Lab File ID: 720423

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.5	U
74-87-3	Chloromethane	8.5	U
75-01-4	Vinyl Chloride	8.5	U
74-83-9	Bromomethane	8.5	U
75-00-3	Chloroethane	8.5	U
75-69-4	Trichlorofluoromethane	8.5	U
107-02-8	Acrolein	43	U
75-35-4	1,1-Dichloroethene	8.5	U
76-13-1	Freon TF	8.5	U
67-64-1	Acetone	20	JB
74-88-4	Methyl Iodide	8.5	U
75-15-0	Carbon Disulfide	8.5	U
107-05-1	Allyl Chloride	8.5	U
75-09-2	Methylene Chloride	8.5	U
107-13-1	Acrylonitrile	8.5	U
156-60-5	trans-1,2-Dichloroethene	8.5	U
1634-04-4	Methyl-t-Butyl Ether	8.5	U
540-59-0	1,2-Dichloroethene (total)	8.5	U
75-34-3	1,1-Dichloroethane	8.5	U
108-05-4	Vinyl Acetate	8.5	U
126-99-8	Chloroprene	8.5	U
594-20-7	2,2-Dichloropropane	8.5	U
156-59-2	cis-1,2-Dichloroethene	8.5	U
78-93-3	2-Butanone	50	B
107-12-0	Propionitrile	34	U
74-97-5	Bromochloromethane	8.5	U
126-98-7	Methacrylonitrile	8.5	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	5.9	JB
71-55-6	1,1,1-Trichloroethane	95	B
56-23-5	Carbon Tetrachloride	8.5	U
563-58-6	1,1-Dichloropropene	8.5	U
71-43-2	Benzene	8.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24343

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720423

Sample wt/vol: 11.7 (g/mL) G Lab File ID: 720423

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	430	U
107-06-2	1,2-Dichloroethane	8.5	U
79-01-6	Trichloroethene	8.5	U
78-87-5	1,2-Dichloropropane	8.5	U
74-95-3	Dibromomethane	8.5	U
80-62-6	Methyl Methacrylate	8.5	U
123-91-1	1,4-Dioxane	430	U
75-27-4	Bromodichloromethane	8.5	U
110-75-8	2-Chloroethyl Vinyl Ether	8.5	U
10061-01-5	cis-1,3-Dichloropropene	8.5	U
108-10-1	4-Methyl-2-pentanone	43	U
108-88-3	Toluene	8.5	U
10061-02-6	trans-1,3-Dichloropropene	8.5	U
97-63-2	Ethyl Methacrylate	8.5	U
79-00-5	1,1,2-Trichloroethane	8.5	U
127-18-4	Tetrachloroethene	8.5	U
142-28-9	1,3-Dichloropropane	8.5	U
591-78-6	2-Hexanone	43	U
124-48-1	Dibromochloromethane	8.5	U
106-93-4	1,2-Dibromoethane	8.5	U
108-90-7	Chlorobenzene	8.5	U
630-20-6	1,1,1,2-Tetrachloroethane	8.5	U
100-41-4	Ethylbenzene	8.5	U
1330-20-7	Xylene (m,p)	8.5	U
95-47-6	Xylene (o)	8.5	U
1330-20-7	Xylene (total)	8.5	U
100-42-5	Styrene	8.5	U
75-25-2	Bromoform	8.5	U
98-82-8	Isopropylbenzene	8.5	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.5	U
108-86-1	Bromobenzene	8.5	U
79-34-5	1,1,2,2-Tetrachloroethane	8.5	U
96-18-4	1,2,3-Trichloropropane	8.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24343

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720423

Sample wt/vol: 11.7 (g/mL) G Lab File ID: 720423

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.5	U
103-65-1	n-Propylbenzene	8.5	U
95-49-8	2-Chlorotoluene	8.5	U
106-43-4	4-Chlorotoluene	8.5	U
108-67-8	1,3,5-Trimethylbenzene	8.5	U
98-06-6	tert-Butylbenzene	8.5	U
95-63-6	1,2,4-Trimethylbenzene	8.5	U
135-98-8	sec-Butylbenzene	8.5	U
541-73-1	1,3-Dichlorobenzene	8.5	U
99-87-6	4-Isopropyltoluene	8.5	U
106-46-7	1,4-Dichlorobenzene	8.5	U
95-50-1	1,2-Dichlorobenzene	8.5	U
104-51-8	n-Butylbenzene	8.5	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.5	U
120-82-1	1,2,4-Trichlorobenzene	8.5	U
87-68-3	Hexachlorobutadiene	8.5	U
91-20-3	Naphthalene	8.5	U
87-61-6	1,2,3-Trichlorobenzene	8.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24665

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720425

Sample wt/vol: 11.1 (g/mL) G Lab File ID: 720425

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	9.0	U
74-87-3	Chloromethane	9.0	U
75-01-4	Vinyl Chloride	9.0	U
74-83-9	Bromomethane	9.0	U
75-00-3	Chloroethane	9.0	U
75-69-4	Trichlorofluoromethane	9.0	U
107-02-8	Acrolein	45	U
75-35-4	1,1-Dichloroethene	9.0	U
76-13-1	Freon TF	9.0	U
67-64-1	Acetone	45	U
74-88-4	Methyl Iodide	9.0	U
75-15-0	Carbon Disulfide	9.0	U
107-05-1	Allyl Chloride	9.0	U
75-09-2	Methylene Chloride	9.0	U
107-13-1	Acrylonitrile	9.0	U
156-60-5	trans-1,2-Dichloroethene	9.0	U
1634-04-4	Methyl-t-Butyl Ether	9.0	U
540-59-0	1,2-Dichloroethene (total)	9.0	U
75-34-3	1,1-Dichloroethane	9.0	U
108-05-4	Vinyl Acetate	9.0	U
126-99-8	Chloroprene	9.0	U
594-20-7	2,2-Dichloropropane	9.0	U
156-59-2	cis-1,2-Dichloroethene	9.0	U
78-93-3	2-Butanone	45	U
107-12-0	Propionitrile	36	U
74-97-5	Bromochloromethane	9.0	U
126-98-7	Methacrylonitrile	9.0	U
109-99-9	Tetrahydrofuran	130	U
67-66-3	Chloroform	9.0	U
71-55-6	1,1,1-Trichloroethane	9.0	U
56-23-5	Carbon Tetrachloride	9.0	U
563-58-6	1,1-Dichloropropene	9.0	U
71-43-2	Benzene	9.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24665

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720425

Sample wt/vol: 11.1 (g/mL) G Lab File ID: 720425

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	450	U
107-06-2	1,2-Dichloroethane	9.0	U
79-01-6	Trichloroethene	9.0	U
78-87-5	1,2-Dichloropropane	9.0	U
74-95-3	Dibromomethane	9.0	U
80-62-6	Methyl Methacrylate	9.0	U
123-91-1	1,4-Dioxane	450	U
75-27-4	Bromodichloromethane	9.0	U
110-75-8	2-Chloroethyl Vinyl Ether	9.0	U
10061-01-5	cis-1,3-Dichloropropene	9.0	U
108-10-1	4-Methyl-2-pentanone	45	U
108-88-3	Toluene	9.0	U
10061-02-6	trans-1,3-Dichloropropene	9.0	U
97-63-2	Ethyl Methacrylate	9.0	U
79-00-5	1,1,2-Trichloroethane	9.0	U
127-18-4	Tetrachloroethene	9.0	U
142-28-9	1,3-Dichloropropane	9.0	U
591-78-6	2-Hexanone	45	U
124-48-1	Dibromochloromethane	9.0	U
106-93-4	1,2-Dibromoethane	9.0	U
108-90-7	Chlorobenzene	9.0	U
630-20-6	1,1,1,2-Tetrachloroethane	9.0	U
100-41-4	Ethylbenzene	9.0	U
1330-20-7	Xylene (m,p)	9.0	U
95-47-6	Xylene (o)	9.0	U
1330-20-7	Xylene (total)	9.0	U
100-42-5	Styrene	9.0	U
75-25-2	Bromoform	9.0	U
98-82-8	Isopropylbenzene	9.0	U
1476-11-5	cis-1,4-Dichloro-2-butene	9.0	U
108-86-1	Bromobenzene	9.0	U
79-34-5	1,1,2,2-Tetrachloroethane	9.0	U
96-18-4	1,2,3-Trichloropropane	9.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-24665

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720425

Sample wt/vol: 11.1 (g/mL) G Lab File ID: 720425

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	9.0	U
103-65-1	n-Propylbenzene	9.0	U
95-49-8	2-Chlorotoluene	9.0	U
106-43-4	4-Chlorotoluene	9.0	U
108-67-8	1,3,5-Trimethylbenzene	9.0	U
98-06-6	tert-Butylbenzene	9.0	U
95-63-6	1,2,4-Trimethylbenzene	9.0	U
135-98-8	sec-Butylbenzene	9.0	U
541-73-1	1,3-Dichlorobenzene	9.0	U
99-87-6	4-Isopropyltoluene	9.0	U
106-46-7	1,4-Dichlorobenzene	9.0	U
95-50-1	1,2-Dichlorobenzene	9.0	U
104-51-8	n-Butylbenzene	9.0	U
96-12-8	1,2-Dibromo-3-Chloropropane	9.0	U
120-82-1	1,2,4-Trichlorobenzene	9.0	U
87-68-3	Hexachlorobutadiene	9.0	U
91-20-3	Naphthalene	9.0	U
87-61-6	1,2,3-Trichlorobenzene	9.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-MEOHBLK
-080907

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

CBD 8/27/07

Matrix: (soil/water) SOIL Lab Sample ID: 720426

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 720426

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	20	U
74-87-3	Chloromethane	20	U
75-01-4	Vinyl Chloride	20	U
74-83-9	Bromomethane	20	U
75-00-3	Chloroethane	20	U
75-69-4	Trichlorofluoromethane	20	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene	20	U
76-13-1	Freon TF	20	U
67-64-1	Acetone	55	J
74-88-4	Methyl Iodide	20	U
75-15-0	Carbon Disulfide	20	U
107-05-1	Allyl Chloride	20	U
75-09-2	Methylene Chloride	20	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	20	U
1634-04-4	Methyl-t-Butyl Ether	20	U
540-59-0	1,2-Dichloroethene (total)	20	U
75-34-3	1,1-Dichloroethane	20	U
108-05-4	Vinyl Acetate	20	U
126-99-8	Chloroprene	20	U
594-20-7	2,2-Dichloropropane	20	U
156-59-2	cis-1,2-Dichloroethene	20	U
78-93-3	2-Butanone	150	
107-12-0	Propionitrile	80	U
74-97-5	Bromochloromethane	20	U
126-98-7	Methacrylonitrile	20	U
109-99-9	Tetrahydrofuran	280	U
67-66-3	Chloroform	15	J
71-55-6	1,1,1-Trichloroethane	200	
56-23-5	Carbon Tetrachloride	20	U
563-58-6	1,1-Dichloropropene	20	U
71-43-2	Benzene	20	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-MEOHBLK

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720426

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 720426

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	1000	U
107-06-2	1,2-Dichloroethane	20	U
79-01-6	Trichloroethene	20	U
78-87-5	1,2-Dichloropropane	20	U
74-95-3	Dibromomethane	20	U
80-62-6	Methyl Methacrylate	20	U
123-91-1	1,4-Dioxane	1000	U
75-27-4	Bromodichloromethane	20	U
110-75-8	2-Chloroethyl Vinyl Ether	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
108-10-1	4-Methyl-2-pentanone	100	U
108-88-3	Toluene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
97-63-2	Ethyl Methacrylate	20	U
79-00-5	1,1,2-Trichloroethane	20	U
127-18-4	Tetrachloroethene	20	U
142-28-9	1,3-Dichloropropane	20	U
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	20	U
106-93-4	1,2-Dibromoethane	20	U
108-90-7	Chlorobenzene	20	U
630-20-6	1,1,1,2-Tetrachloroethane	20	U
100-41-4	Ethylbenzene	20	U
1330-20-7	Xylene (m,p)	20	U
95-47-6	Xylene (o)	20	U
1330-20-7	Xylene (total)	20	U
100-42-5	Styrene	20	U
75-25-2	Bromoform	20	U
98-82-8	Isopropylbenzene	20	U
1476-11-5	cis-1,4-Dichloro-2-butene	20	U
108-86-1	Bromobenzene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
96-18-4	1,2,3-Trichloropropane	20	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

PH-S-MEOHBLK

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: POWHAT SAS No.: SDG No.: 121337

Matrix: (soil/water) SOIL Lab Sample ID: 720426

Sample wt/vol: 5.0 (g/mL) G Lab File ID: 720426

Level: (low/med) MED Date Received: 08/10/07

% Moisture: not dec. _____ Date Analyzed: 08/16/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	20	U
103-65-1	n-Propylbenzene	20	U
95-49-8	2-Chlorotoluene	20	U
106-43-4	4-Chlorotoluene	20	U
108-67-8	1,3,5-Trimethylbenzene	20	U
98-06-6	tert-Butylbenzene	20	U
95-63-6	1,2,4-Trimethylbenzene	20	U
135-98-8	sec-Butylbenzene	20	U
541-73-1	1,3-Dichlorobenzene	20	U
99-87-6	4-Isopropyltoluene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
95-50-1	1,2-Dichlorobenzene	20	U
104-51-8	n-Butylbenzene	20	U
96-12-8	1,2-Dibromo-3-Chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	20	U
87-68-3	Hexachlorobutadiene	20	U
91-20-3	Naphthalene	4.2	J
87-61-6	1,2,3-Trichlorobenzene	4.3	J

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